T.J. Arredondo, CFM
Director of Planning

HIDALGO COUNTY
PLANNING DEPARTMENT

1304 SOUTH 25TH STREET
EDINBURG TEXAS 78539
Tel. 956-318-2840 Fax. 956-318-2844

HIDALGO COUNTY COMMISSIONERS COURT MEETING
DATE: 6-27-2017

PROPOSED **CAMINO DE ABRAM** SUBDIVISION, PRECINCT No. **3.**

ENGINEER: **SOUTH TEXAS INFRASTRUCTURE GROUP** DEVELOPER: **MANUEL CHAPA (PENA CHAPA DEV.)**

☒ PRELIMINARY APPROVAL ☐ FINAL APPROVAL ☐ FINAL APPROVAL WITH FINANCIAL GUARANTEE ☐ WITH VARIANCE

NUMBER OF LOTS: **80** ☒ *SINGLE FAMILY ___ ☐ *MULTI-FAMILY ___ ☐ COMMERCIAL ___ ☐ INSTITUTIONAL

LOCATION DESCRIPTION: **EAST OF ABRAM ROAD APPROXIMATELY ½ MILE NORTH OF MILE 3 NORTH ROAD.**

SUBDIVISION LIES WITHIN THE: ☒ *ETJ of* **MISSION** *and was approved by the P & Z and City Commission of said City*

DRAINAGE REPORT WAS APPROVED BY HCDD#1: ON **6-20-2017** PROPERTY LIES WITHIN FLOOD ZONE: **"X"** AS PER FEMA.

DRAINAGE DESIGN: **DRAINAGE CONSISTS OF STORM SEWER SYSTEM DISCHARGING TO AN EXISTING DRAINAGE BASIN OWNED BY THE HCDD#1.**

ROAD R.O.W. DEDICATION: **42.00 ADDITIONAL FEET ONTO ABRAM ROAD.**

H.C.R.O.W. PRELIMINARY APPROVAL DATE: **6-09-2017** BY, **VICTOR GALLARDO, PCT. 3** R.O.W. AGENT

H.C.H.D. PRELIMINARY APPROVAL DATE: **6-09-2017** BY, ENVIRONMENTAL HEALTH DIVISION MANAGER
SEWER SYSTEM: ☒ OSSF & SOIL ANALYSIS WERE CONDUCTED BY: **A. IZAGUIRRE**

WATER SERVICE PROVIDER: **AGUA SUD** LINE SIZE: **8"** LOCATION: **MILE 3 NORTH ROAD.**

H.C.E.O.C.PRELIMINARYAPPROVAL DATE: **6-09-2017** : BY **MARTIN RAMIREZ** 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: _____, __

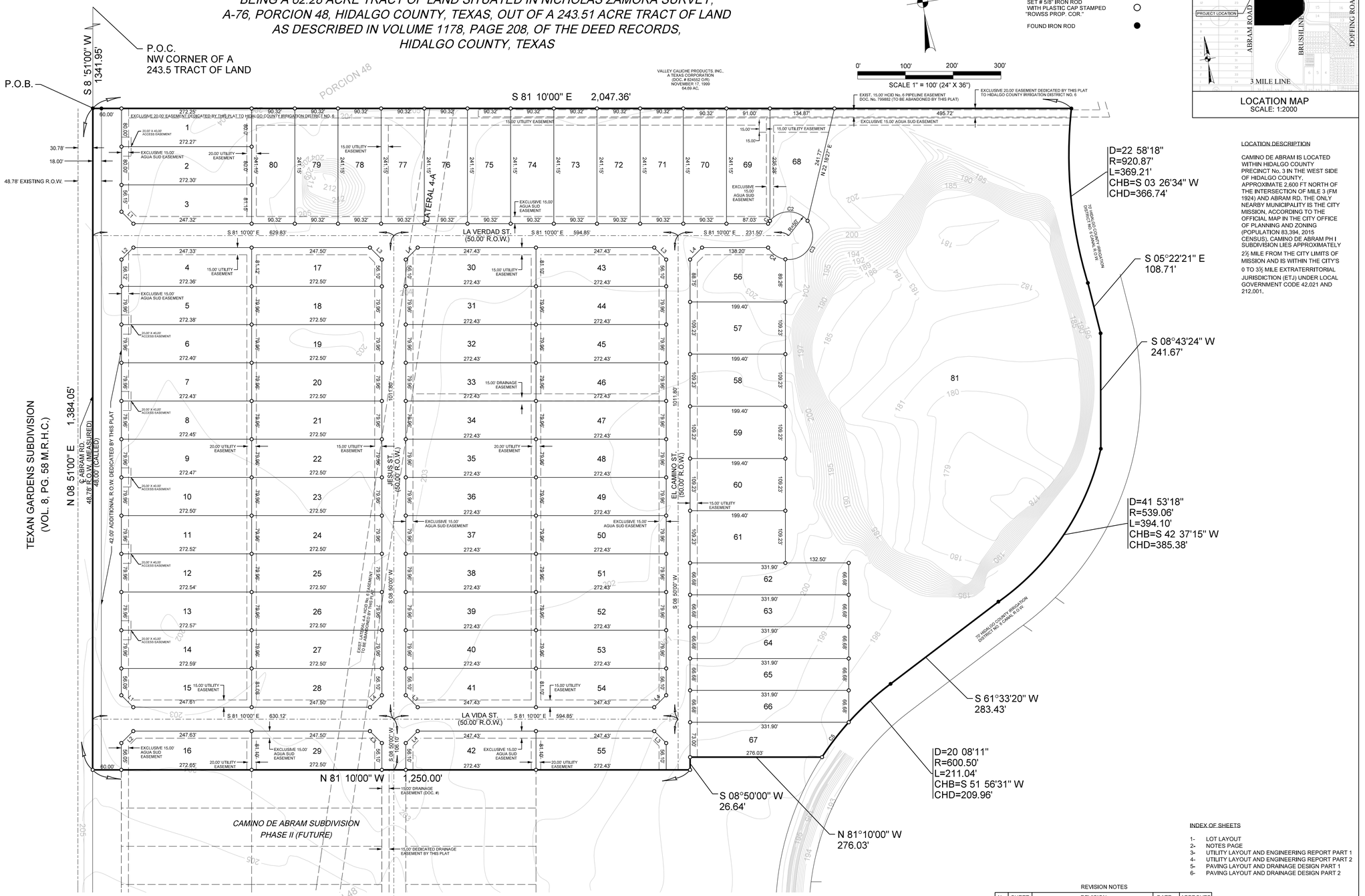
STAFF RECOMMENDS:

☒ **Preliminary Approval** *subject to comments and future recommendations by planning, other departments and the approval of the City of* **MISSION**.
☐ **Final Approval** *subject to recommendations other departments*
☐ **Final Approval** *with financial guarantee.*

* *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.*

CAMINO DE ABRAM SUBDIVISION PH I

BEING A 62.28 ACRE TRACT OF LAND SITUATED IN NICHOLAS ZAMORA SURVEY, A-76, PORCION 48, HIDALGO COUNTY, TEXAS, OUT OF A 243.51 ACRE TRACT OF LAND AS DESCRIBED IN VOLUME 1178, PAGE 208, OF THE DEED RECORDS, HIDALGO COUNTY, TEXAS



SCALE 1" = 100' (24" X 36")

LOCATION MAP
SCALE: 1:2000

LEGEND:

SET # 5/8" IRON ROD WITH PLASTIC CAP STAMPED "ROWSS PROP. COR."

FOUND IRON ROD

LOCATION DESCRIPTION

CAMINO DE ABRAM IS LOCATED WITHIN HIDALGO COUNTY PRECINCT No. 3 IN THE WEST SIDE OF HIDALGO COUNTY, APPROXIMATE 2,600 FT NORTH OF THE INTERSECTION OF MILE 3 (FM 1924) AND ABRAM RD, THE ONLY NEARBY MUNICIPALITY IS THE CITY MISSION, ACCORDING TO THE OFFICIAL MAP IN THE CITY OFFICE OF PLANNING AND ZONING (POPULATION 83,394, 2015 CENSUS), CAMINO DE ABRAM PH I SUBDIVISION LIES APPROXIMATELY 2½ MILE FROM THE CITY LIMITS OF MISSION AND IS WITHIN THE CITY'S 0 TO 3½ MILE EXTRATERRITORIAL JURISDICTION (ETJ) UNDER LOCAL GOVERNMENT CODE 42.021 AND 212.001.

LOT AREA TABLE		
LOT	SQUARE FT.	ACRES
1	21781	0.50
2	21783	0.50
3	21785	0.50
4	21780	0.50
5	21779	0.50
6	21781	0.50
7	21782	0.50
8	21784	0.50
9	21786	0.50
10	21788	0.50
11	21790	0.50
12	21792	0.50
13	21794	0.50
14	21795	0.50
15	21790	0.50
16	21799	0.50
17	21793	0.50
18	21789	0.50
19	21789	0.50
20	21789	0.50
21	21789	0.50
22	21789	0.50
23	21789	0.50
24	21789	0.50
25	21789	0.50
26	21789	0.50
27	21789	0.50
28	21782	0.50
29	21787	0.50
30	21781	0.50
31	21783	0.50
32	21783	0.50
33	21783	0.50
34	21783	0.50
35	21783	0.50
36	21783	0.50
37	21783	0.50
38	21783	0.50
39	21783	0.50
40	21783	0.50

LOT AREA TABLE		
LOT	SQUARE FT.	ACRES
41	21781	0.50
42	21781	0.50
43	21781	0.50
44	21783	0.50
45	21783	0.50
46	21783	0.50
47	21783	0.50
48	21783	0.50
49	21783	0.50
50	21783	0.50
51	21783	0.50
52	21783	0.50
53	21783	0.50
54	21781	0.50
55	21781	0.50
56	21778	0.50
57	21780	0.50
58	21780	0.50
59	21780	0.50
60	21780	0.50
61	21780	0.50
62	22132	0.51
63	22128	0.51
64	22128	0.51
65	22128	0.51
66	22128	0.51
67	22081	0.51
68	24052	0.55
69	21932	0.50
70	21781	0.50
71	21781	0.50
72	21781	0.50
73	21781	0.50
74	21781	0.50
75	21781	0.50
76	21781	0.50
77	21781	0.50
78	21781	0.50
79	21781	0.50
80	21781	0.50
81	639440	14.68

CURVE TABLE					
CURVE	LENGHT	RADIUS	DELTA	CHORD	CHORD BEARING
C1	7.09'	50.00'	08°07'27"'	7.08'	S42°53'44"E
C2	90.33'	50.00'	103°30'38"'	78.54'	S81°17'13"E
C3	119.15'	50.00'	136°31'58"'	92.89'	S38°44'05"W
C4	45.23'	50.00'	51°49'56"'	43.71'	N47°04'58"W
C5	211.04'	600.50'	20°08'11"'	209.96'	S51°56'31"W

LINE TABLE		
LINE	LENGTH	BEARING
L1	35.35'	N36°09'30"W
L2	35.36'	N53°50'30"E
L3	35.36'	S36°10'00"E
L4	35.36'	S53°50'30"W

STATE OF TEXAS
COUNTY OF HIDALGO

KNOW ALL MEN BY THESE PRESENTS:

I, JULIO C. CERDA, A REGISTERED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS, LICENSE NUMBER 90524, DO HEREBY CERTIFY THAT THIS PLAT HAS BEEN GIVEN PROPER AND ADEQUATE ENGINEERING CONSIDERATION.

_____
JULIO C. CERDA, P.E.
LICENSED PROFESSIONAL ENGINEER, TEXAS LIC. NO. 90524

STATE OF TEXAS
COUNTY OF HIDALGO

KNOW ALL MEN BY THESE PRESENTS:

I, KURT SCHUMACHER, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE AND PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND ON _____ UNDER MY DIRECTION.

_____
KURT SCHUMACHER, R.P.L.S.
REG. PROFESSIONAL LAND SURVEYOR # 6333
FIRM #
900 S. STEWART, SUITE 13
MISSION, TEXAS 78572

INDEX OF SHEETS

1- LOT LAYOUT
2- NOTES PAGE
3- UTILITY LAYOUT AND ENGINEERING REPORT PART 1
4- UTILITY LAYOUT AND ENGINEERING REPORT PART 2
5- PAVING LAYOUT AND DRAINAGE DESIGN PART 1
6- PAVING LAYOUT AND DRAINAGE DESIGN PART 2

REVISION NOTES

No.	SHEET	REVISION	DATE	APPROVED

PRELIMINARY REVIEW

LOT LAYOUT

SHEET 1 OF 6

PRINCIPAL CONTACTS:

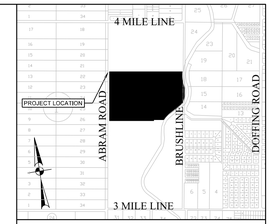
	NAME	ADRESS	CITY & ZIP	PHONE	FAX
OWNER:	MANUEL CHAPA	1801 MOZELLE ST.	PHARR, TEXAS 78577	(956) 778-3404	
ENGINEER:	JULIO C. CERDA, P.E.	900 S. STEWART RD., STE. 13	MISSION, TEXAS 78572	(956) 424-3335	(956) 583-7116
SURVEYOR:	KURT SCHUMACHER, R.P.L.S.	900 S. STEWART RD., STE. 13	MISSION, TEXAS 78572	(956) 424-3335	(956) 583-7116

SOUTH TEXAS INFRASTRUCTURE GROUP
900 S. STEWART, SUITE 13
MISSION, TEXAS 78572
PH: (956) 424-3355
FAX: (956) 583-7116
TBPE REG. # 1500

SOUTH TEXAS INFRASTRUCTURE GROUP

CAMINO DE ABRAM SUBDIVISION PH I

BEING A 62.28 ACRE TRACT OF LAND SITUATED IN NICHOLAS ZAMORA SURVEY, A-76, PORCION 48, HIDALGO COUNTY, TEXAS, OUT OF A 243.51 ACRE TRACT OF LAND AS DESCRIBED IN VOLUME 1178, PAGE 208, OF THE DEED RECORDS, HIDALGO COUNTY, TEXAS



LOCATION MAP
SCALE: 1:2000

METES AND BOUNDS

STATE OF TEXAS
COUNTY OF HIDALGO

OWNER'S DEDICATION, CERTIFICATION, AND ATTESTATION:

I MANUEL CHAPA, AS OWNER OF THE 62.28 ACRE TRACT OF LAND ENCOMPASSED WITHIN THE PROPOSED CAMINO DE ABRAM SUBDIVISION, HEREBY SUBDIVIDE THE LAND AS DEPICTED IN THIS SUBDIVISION PLAT AND DEDICATED TO PUBLIC USE THE STREET, PARK, AND EASEMENTS SHOWN HEREIN.

I CERTIFY THAT I HAVE COMPLIED WITH THE REQUIREMENTS OF TEXAS LOCAL GOVERNMENT CODE 232.032 AND THAT:

(A) THE WATER QUALITY AND CONNECTIONS TO THE LOTS MEET, OR WILL MEET, THE MINIMUM STATE STANDARDS.

(B) SEWER CONNECTIONS TO THE LOTS OR SEPTIC TANKS MEET, OR WILL MEET, THE MINIMUM REQUIREMENTS OF THE STATE STANDARDS

(C) ELECTRICAL CONNECTIONS PROVIDED TO THE LOTS MEET, OR WILL MEET, THE MINIMUM STATE STANDARDS

(D) GAS CONNECTIONS, IF AVAILABLE, PROVIDED TO THE LOTS MEET, OR WILL MEET, THE MINIMUM STATE STANDARDS

I ATTEST THAT THE MATTERS ASSERTED IN THIS PLAT ARE TRUE AND COMPLETE

_____ _____
MANUEL CHAPA DATE
1801 MOZELLE ST.
PHARR, TEXAS 78577

THIS PLAT OF CAMINO DE ABRAM HAS BEEN SUBMITTED TO AND CONSIDERED BY THE PLANNING AND ZONING COMISSION OF THE CITY OF MISSION, TEXAS AND IS HEREBY APPROVED BY SUCH COMMISSION.

DATED THIS _____DAY OF_____, 20___.

_____
CHAIRMAN

CITY OF MISSION CERTIFICATE OF APPROVAL

UNDER LOCAL GOVERNMENT CODE 212.0115(B) WE THE UNDERSIGNED CERTIFY THAT THIS PLAT OF CAMINO DE ABRAM SUBDIVISION WAS REVIEWED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF MISSION.

_____ _____
MAYOR CITY OF MISION DATE

_____ _____
ATTEST: CITY SECRETARY DATE

STATE OF TEXAS
COUNTY OF HIDALGO

KNOW ALL MEN BY THESE PRESENTS:

I, JULIO C. CERDA, A REGISTERED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS, LICENSE NUMBER 90524, DO HEREBY CERTIFY THAT THIS PLAT HAS BEEN GIVEN PROPER AND ADEQUATE ENGINEERING CONSIDERATION.

_____
JULIO C. CERDA, P.E.
LICENSED PROFESSIONAL ENGINEER, TEXAS LIC. NO. 90524

STATE OF TEXAS
COUNTY OF HIDALGO

KNOW ALL MEN BY THESE PRESENTS:

I, KURT SCHUMACHER, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE AND PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND ON _____ UNDER MY DIRECTION.

_____
KURT SCHUMACHER, R.P.L.S.
REG. PROFESSIONAL LAND SURVEYOR # 6333
FIRM # _____
900 S. STEWART, SUITE 13
MISSION, TEXAS 78572

APPROVED BY DRAINAGE DISTRICT:

HIDALGO COUNTY DRAINGE DISTRICT NO. 1 HEREBY CERTIFIES THAT THE DRAINAGE PLANS FOR THIS SUBDIVISION COMPLY WITH THE MINIMUM STANDARDS OF THE DISTRICT ADOPTED UNDER TEXAS WATER CODE 49.211(C). THE DISTRICT HAS NOT REVIEWED AND DOES NOT CERTIFY THAT THE DRAINAGE STRUCTURES DESCRIBED ARE APPROPRIATE FOR THE SPECIFIC SUBDIVISION BASED ON GENERALLY ACCEPTED ENGINEERING CRITERIA. IT IS THE RESPONSIBILITY OF THE DEVELOPER AND HIS ENGINEER TO MAKE THEIR DETERMINATIONS.

HIDALGO COUNTY DRAINAGE DISTRICT NO. 1

_____ _____
RAUL E. SESIN, P.E., C.F.M. DATE

THIS PLAT IS HEREBY APPROVED BY THE HIDALGO COUNTY IRRIGATION DISTRICT NO. 6 ON THIS THE _____ DAY OF _____ 20___.

NO IMPROVEMENTS OF ANY KIND (INCLUDING WITHOUT LIMITATION TREES, FENCES AND BUILDINGS) SHALL BE PLACED UPON IRRIGATION DISTRICT No. 6 RIGHT OF WAYS OR EASEMENTS. APPROVAL OF THIS PLAT DOES NOT RELEASE ANY RIGHTS THAT THE DISTRICT MAY HAVE WHETHER SHOWN OR NOT.

ATTIEST: _____
PRESIDENT

_____
SECRETARY

HIDALGO COUNTY
CERTIFICATE OF PLAT APPROVAL

I, THE UNDERSIGNED CERTIFY THAT THIS PLAT OF CAMINO DE ABRAM SUBDIVISION WAS REVIEWED AND APPROVED BY THE HIDALGO COUNTY HEALTH DEPARTMENT ON _____, _____.

_____ _____
ENVIRONMENTAL HEALTH DIVISION MANAGER DATE

SATE OF TEXAS
COUNTY OF HIDALGO

WE, THE UNDERSIGNED CERTIFY THAT THIS PLAT OF CAMINO DE ABRAM SUBDIVISION WAS REVIEWED AND APPROVED BY THE HIDALGO COUNTY COMMISSIONERS COURT ON _____, _____.

_____ _____
HIDALGO COUNTY JUDGE DATE

GENERAL NOTES:

1. THIS PROPERTY IS LOCATED IN FLOOD ZONE X-. AREAS DETERMINED TO BE OUTSIDE 500-YEAR-FLOOD-PLAIN AS PER COMMUNITY PANEL NO. 480334 0290 D, REVISED JUNE 6, 2000

2. MINIMUM BUILDING SETBACK LINES:
FRONT SETBACK:
25 FEET OR EASEMENT WHICHEVER IS GREATER
50 FEET FOR LOTS FRONTING ABRAM ROAD
SIDE SETBACK:
INTERNAL LOT: 6.00 FEET OR EASEMENT WHICHEVER IS GREATER
EXTERNAL LOT: 10.00 FEET OR EASEMENT WHICHEVER IS GREATER
REAR SETBACK: 10.00 FEET OR EASEMENT WHICHEVER IS GREATER

3. NO MORE THAN ONE SINGLE FAMILY DETACHED DWELLING SHALL BE LOCATED ON THE LOT. THIS MUST BE STIPULATED ON ALL DEEDS AND CONTRACTS FOR DEEDS.

4. MINIMUM FINISHED FLOOR ELEVATION SHALL BE 24" ABOVE TOP OF CURB OR 24" ABOVE NATURAL GROUND, WHICHEVER IS GREATER.

5. THE FOLLOWING BENCHMARKS ARE IDENTIFIED ON THE FACE OF THE PLAT AND ON THE ATTACHED ENGINEERING PLANS.

BM-1 IS A SET 5/8" IRON PIN WITH PLASTIC CAP "ROWSS CONTROL"
ALONG THE ABRAM RD
N= 16623705.1321
E= 1019340.7681
ELEV.= 199.40

BM-2 IS A SET 5/8" IRON PIN WITH PLASTIC CAP "ROWSS CONTROL"
ALONG THE ABRAM RD
N= 16624543.4883
E= 1019473.1760
ELEV.= 204.53

BM-3 IS A SET 5/8" IRON PIN WITH PLASTIC CAP "ROWSS CONTROL"
ALONG THE _____
N= _____
E= _____
ELEV.= _____

6. IN ACCORDANCE WITH THE HIDALGO COUNTY DRAINAGE DISTRICT NO. 1 A TOTAL OF 263,711 CUBIC FEET, 6.054 ACRE-FEET OF DETENTION IS REQUIRED FOR THIS SUBDIVISION.

7. NO STRUCTURE SHALL BE PERMITTED OVER ANY EASEMENT. EASEMENTS SHALL BE KEPT CLEAR OF BUILDINGS. SHEDS, SHRUBS TREES, AND OTHER PLANTINGS (EXCEPT LOW, LESS THAN 18 INCHES MATURE HEIGHT, GROUND COVER, GRASS, OR FLOWERS) AND OTHER OBSTRUCTIONS THAT WOULD INTERFERE WITH THE OPERATIONS AND MAINTENANCE OF THE EASEMENT.

8. EACH PURCHASE CONTRACT MADE BETWEEN A SUBDIVIDER AND PURCHASER OF A LOT IN THIS SUBDIVISION SHALL CONTAIN A STATEMENT DESCRIBING HOW AND WHEN WATER, SEWER, ELECTRICITY, AND GAS SERVICES WILL BE MADE AVAILABLE TO THE SUBDIVISION.

9. ALL PUBLIC UTILITIES EASEMENTS DEDICATED BY THIS PLAT SHALL BE A MINIMUM WIDTH OF 15.00 FEET AS PER THE HIDALGO COUNTY MODEL SUBDIVISION RULES, BY SIGNING THIS PLAT, DEVELOPER AND ENGINEER CERTIFY THAT ALL OTHER EASEMENTS SHOWN COMPLY WITH THE SIZE REQUIRED BY EACH UTILITY PROVIDER OCCUPYING AN EASEMENT.

10. ON-SITE SEWAGE FACILITIES (OSSF) NOTE: THIS SUBDIVISION SHALL USE ON-SITE SEWAGE FACILITIES IN ACCORDANCE WITH TCEQ AND HIDALGO COUNTY REGULATIONS FOR SEWAGE DISPOSAL. THE SUBDIVIDER IS RESPONSIBLE FOR PROVIDING AN OSSF ON LOT.

A. OSSF SYSTEM IS BEING DESIGNED FOR DISPOSAL OF DOMESTIC SEWERAGE ONLY.

B. EACH LOT ON THIS PLAT COMPLIES WITH THE MINIMUM 21,780 SQUARE FEET LOT AREA WITH POTABLE WATER SUPPLY.

C. OSSF SYSTEM SHALL REQUIRE INSPECTION AND APPROVAL BY HIDALGO COUNTY AUTHORIZED DEPARTMENT

D. SOIL ANALYSIS HAVE BEEN SUBMITTED TO THE AUTHORIZED HIDALGO COUNTY DEPARTMENT AND EXCERPTS MAY BE ALSO SEEN ON THE UTILITY LAYOUT FOR THIS SUBDIVISION AS SUBMITTED TO THE HIDALGO COUNTY PLANNING DEPARTMENT. THE ENGINEER HAS DETERMINED THAT THE SOIL IS SUITABLE FOR A STANDARD SEPTIC TANK AND ABSORPTIVE DRAINFIELD SYSTEM.

E. APPROVED "OSSF" PERMIT APPLICATION IS REQUIRED INCLUDING INDIVIDUAL LOT PLANNING MATERIALS PRIOR TO OCCUPYING A LOT.

11. THERE ARE NO WATER WELLS WITHIN 150 FEET FROM THE BOUNDARIES ON THIS SUBDIVISION.

12. MANUEL CHAPA, THE OWNER & SUBDIVIDER OF CAMINO DE ABRAM SUBDIVISION, RETAINS A BLANKET EASEMENT UPON EACH LOT FOR THE PURPOSE OF INSTALLING AN APPROVED OSSF ON THE LOT AS DESCRIBED ON SHEET NO. 3 OF THIS PLAT.

13. LOT 3, 4, 15 WILL NOT HAVE ACCES FROM ABRAM RD.

THE COUNTY OF HIDALGO TEXAS

FILED FOR RECORD IN
HIDALGO COUNTY
ARTURO GUAJARDO, JR.
HIDALGO COUNTY CLERK

ON _____ AT _____ AM/PM
INSTRUMENT NUMBER _____
OF THE MAP RECORDS OF HIDALGO COUNTY, TEXAS

BY: _____ DEPUTY

INDEX OF SHEETS

1- LOT LAYOUT
2- NOTES PAGE
3- UTILITY LAYOUT AND ENGINEERING REPORT PART 1
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PRELIMINARY REVIEW

NOTES PAGE
SHEET 2 OF 6

PRINCIPAL CONTACTS:

	NAME	ADDRESS	CITY & ZIP	PHONE	FAX
OWNER:	MANUEL CHAPA	1801 MOZELLE ST.	PHARR, TEXAS 78577	(956) 778-3404	
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TBPE REG. # 1500

SOUTH TEXAS INFRASTRUCTURE GROUP

CAMINO DE ABRAM SUBDIVISION PH I

BEING A 62.28 ACRE TRACT OF LAND SITUATED IN NICHOLAS ZAMORA SURVEY, A-76, PORCION 48, HIDALGO COUNTY, TEXAS, OUT OF A 243.51 ACRE TRACT OF LAND AS DESCRIBED IN VOLUME 1178, PAGE 208, OF THE DEED RECORDS, HIDALGO COUNTY, TEXAS

WATER AND SEWER ENGINEERING REPORT

WATER SUPPLY (DESCRIPTION, COST, AND OPERABILITY DATE:

CAMINO DE ABRAM SUBDIVISION WILL BE PROVIDED WITH POTABLE WATER BY AGUA SPECIAL UTILITY DISTRICT (AGUA SUD). THE SUBDIVIDER AND AGUA SUD HAVE ENTERED INTO A CONTRACT IN WHICH AGUA SUD HAS PROMISED TO PROVIDE SUFFICIENT WATER TO THE SUBDIVISION FOR AT LEAST 30 YEARS AND AGUA SUD HAS PROVIDED DOCUMENTATION TO SUFFICIENTLY ESTABLISH THE LONG TERM QUANTITY AND QUALITY OF THE AVAILABLE WATER SUPPLIES TO SERVE THE FULL DEVELOPMENT OF THIS SUBDIVISION.

CAMINO DE ABRAM ONLY HAS 81 LOTS. AGUA SUD HAS AN EXISTING 8" DIAMETER WATER LINE RUNNING ALONG THE NORTH SIDE OF THE RIGHT-OF-WAY OF MILE 3 RD AND AN EXISTING 8" DIAMETER WATER LINE RUNNING ALONG THE NORTHEAST LINE OF THE SUBDIVISION, BEING ALSO THE WEST LINE OF AN IRRIGATION DISTRICT NO. 6 CANAL. THE WATER SYSTEM FOR CAMINO DE ABRAM CONSISTS OF AN 8" DIAMETER LINE THAT TAPS INTO THE MENTIONED 8 " DIAMETER LINE LOCATED ON 3 MILE RD THEN RUNS NORTH ALONG THE EAST SIDE OF ABRAM RD, THEN EAST INTO THE SUBDIVISION AND FINALLY TAPS INTO THE PREVIOUSLY MENTIONED 8" DIAMETER LINE LOCATED ON THE WEST SIDE OF THE IRRIGATION NO. 6 CANAL.

WATER DISTRIBUTION FOR CAMIINO DE ABRAM CONSISTS OF EIGHTY (38) - 2" DIAMETER DOUBLE SERVICE LINES RUNING TO PAIR OF LOTS BEFORE SPLITTING INTO TWO 1" DIAMETER SINGLE SERVICE LINES AND FIVE (5) - 1" DIAMETER SINGLE SERVICE LINES THAT RUN INTO THE LOTS. THE 8"LINE, THE 2" DOUBLE SERVICE LINES, THE 1" SINGLE SERVICE LINES AND THE METER BOXES HAVE ALREADY BEEN INSTALLED, AT A TOTAL OF $_____ OR $_____ PER LOT. IN ADDITION THE SUBDIVIDER HAS PAID AGUA SUD THE SUM OF $_____, WHICH COVERS THE $_____ COST PER LOT AS STATED IN THE 30 YEAR 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 AGUA SUD UPON REQUEST BY THE LOT OWNER, AGUA SUD WILL PROMPTLY INSTALL AT NO CHARGE THE WATER METER FOR THAT LOT. THE SUBDIVIDER HAS INSTALLED NINE (9) FIRE HYDRANTS AT A UNIT COST OF $_____ FOR A TOTAL COST OF $_____. THE ENTIRE WATER FACILITIES HAVE BEEN APPROVED AND ACCEPTED BY AGUA SUD AND SAID DISTRIBUTION SYSTEM OPERABLE AS OF THE DATE OF THE RECORDING OF THE PLAT.

SEWAGE FACILITIES: DESCRIPTION, COSTS, AND OPERABILITY DATE

SEWAGE FROM CAMINO DE ABRAM SUBDIVISION WILL BE TREATED BY INDIVIDUAL ON-SITE SEWAGE FACILITIES ("OSSF") CONSISTING OF A STANDARD DESIGN DUAL COMPARTMENT SEPTIC TANK AND DRAIN FIELD ON LOTS 1 TO 81. THE UNDERSIGNED PROFESSIONAL ENGINEER HAS EVALUATED THE SUITABILITY OF THE SUBDIVISION SITE FOR OSSF AND SUBMITTED A REPORT CONCLUDING THE SITE IS SUITABLE FOR OSSF. THE REPORT WAS REVIEWED AND APPROVED BY THE HIDALGO COUNTY HEALTH DEPARTMENT. EACH LOT HAS ADEQUATE AREA FOR A REPLACEMENT DRAIN FIELD.

SOIL EVALUATION REPORT:

EACH LOT IN THE PROPOSED SUBDIVISION IS AT LEAST ½ ACRE IN SIZE. THE NATURAL RESOURCE CONSERVATION SERVICE SOIL SURVEY BOOK INDICATED A SANDY LOAM SOIL FOR THE AREA. AT LEAST TWO SOIL EXCAVATIONS WERE PERFORMED ON THE SITE, AT OPPOSITE AREAS OF THE SUBDIVISION, A TOTAL OF 14 SOIL BORING EXCAVATION WERE PERFORMED. (ADDITIONAL BORINGS WERE UNNECESSARY BECAUSE THE SOILS ARE VERY UNIFORM WITHIN THIS LIMIT AREA). THE SOIL IS A UNIFORM SANDY LOAM EXTENDING UP TO 36"BELOW THE BOTTOM OF ANY PROPOSED EXCAVATIONS. THERE IS NO INDICATION OF GROUNDWATER OR A RESTRICTIVE LAYER WITHIN 24"OF BOTTOM OF THE PROPOSED EXCAVATIONS. THE SUBDIVISION DRAINS WELL.

THE COST TO INSTALL A SEPTIC SYSTEM ON AN INDIVIDUAL LOT IS $_____, INCLUDING THE COST FOR THE REQUIRED PERMIT AND LICENSE. ALL OSSF HAVE BEEN INSTALLED AS OF THE TIME OF APPLICATION FOR FINAL PLAT APPROVAL AT A TOTAL COST $_____. THE HIDALGO COUNTY HEALTH DEPARTMENT HAS INSPECTED AND APPROVED THE INSTALLATION OF ONE OSSF ON __/__/17.

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 THE WATER AND THE UNCONSTRUCTED ON-SITE SEWAGE FACILITIES, DISCUSSED ABOVE, ARE AS FOLLOWS:
WATER FACILITIES- THESE FACILITIES FULLY CONSTRUCTED, WITH THE INSTALLATION OF WATER METERS, WILL COST A GRAND TOTAL OF $_____
SEWAGE FACILITIES- SEPTIC SYSTEM IS ESTIMATED TO COST $_____

_____ _____
JULIO C. CERDA, P.E. DATE

REPORTE DE INGENIERIA DE AGUA Y DRENAJE

WATER SUPPLY (DESCRIPCIÓN, GASTOS Y FECHAS DE INICIO):

LA SUBDIVISIÓN CAMINO DE ABRAM RECIBIRÁSU PROVISIÓN DE AGUA DE AGUA SPECIAL UTILITY DISTRICT (AGUA SUD). EL DUEÑO DE LA SUBDIVISIÓN Y AGUA SUD HAN FIRMADO UN CONTRATO POR EL CUAL LA SUBDIVISIÓN RECIBIRÁSU PROVISIÓN DE AGUA POR LOS PRÓXIMOS 30 AÑOS. AUGA SUD HA PRESENTADO DOCUMENTACIÓN PARA DEMOSTRAR A LARGO PLAZO LA CANTIDAD Y CALIDAD DE AGUA ACCESIBLE PARA SERVIR EL FUTURO DESARROLLO DE LA SUBDIVISIÓN.

LA SUBDIVISIÓN CAMINO DE ABRAM TIENE 81 LOTES. AGUA SUD TIENE UN EXISTENTE CONDUCTO DE AGUA DE 8" DE DIAMETRO CORRIENDO SOBRE EL LADO NORTE DEL DERECHO DE VIA (RIGHT OF WAY) DE LA CARRETERA MILE 3 Y UN EXISTENTE CONDUCTO DE AGUA DE 8" DE DIAMETRO CORRIENDO SOBRE LA LINEA NORESTE DE LA SUBDIVISION, SIENDO TAMBIEN LA LINEA OESTE DE UN CANAL QUE PERTENECE AL DISTRITO DE RIEGO NO. 6.

LA DISTRIBUCION DE AGUA PARA LA SUBDIVISION CAMINO DE ABRAM CONSISTE EN OCHENTA (38) SERVICIOS DOBLES DE 2" DE DIAMETRO QUE CORREN HACIA LOS LOTES SEPRANDOSE ANTES EN DOS 1" DE DIAMETRO SERVICIOS SENCILLOS, Y CINCO (5) SERVICIOS SENCILLOS DE 1" DE DIAMETRO QUE CORREN HACIA LOS LOTES. SE HAN INSTALADO YA LA LINEA DE 8", LOS SERVICIOS DE 1" Y LAS CAJAS DE LOS MEDIDORES A UN COSTO TOAL DE $_____ O $_____ POR LOTE. EL DUEÑO/REPRESENTANTE DE LA SUBDIVISION LE HA PAGADO A AGUA SUD LA CANTIDAD DE $_____ QUE CUBRE EL COSTO DE LOS MEDIDORES ($_____ POR CADA LOTE), ESTE PRECIO INCLUYE TAMBEN EL COSTO DE LA INSTALACION DE CADA MEDIDOR Y LOS GASTOS DE CONEXION CUANDO EL DUEÑO DE ALGUNO DE LOS LOTES SOLICITE UN MEDIDOR DE AGUA, AGUA SUD LO INSTALARA SIN COSTO ALGUNO. EL DUEÑO/REPRESENTANTE DE LA SUBDIVISION HA INSTALADO 9 HIDRANTES CONTRA INCENDIO (FIRE HYDRANTS) A UN COSTO DE $_____ POR CADA UNO, LO CUAL REPRESENTA UNA CANTIDAD TOTAL DE $_____. EL SISTEMA DE AGUA ESTARA 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 SUBDIVISIÓN

SE INSTALARÁ UNA FOSA SÉPTICA EN CADA SOLAR. ESTA FOSA SÉPTICA CONSISTE DE UN TANQUE SÉPTICO DE MODELO DUAL Y DE UN CAMPO DE DRENAJE PARA EL SOLAR. EL INGENIERO AUTOR DE ESTE DOCUMENTO HA EVALUADO EL ÁREA DONDE SE ENCUENTRA LA SUBDIVISIÓN Y HA PREPARADO UN REPORTE QUE CONCLUYE QUE ESTE TERRENO ES ADECUADO PARA ESAS FOSAS SÉPTICAS (OSSF). EL REPORTE FUE APROBADO POR EL DEPARTAMENTO DE SALUBRIDAD DEL CONDADO DE HIDALGO (HIDALGO COUNTY HEALTH DEPARTMENT) SEGÚN EL REPORTE.

REPORTE DE EVALUACION DE SUELO:

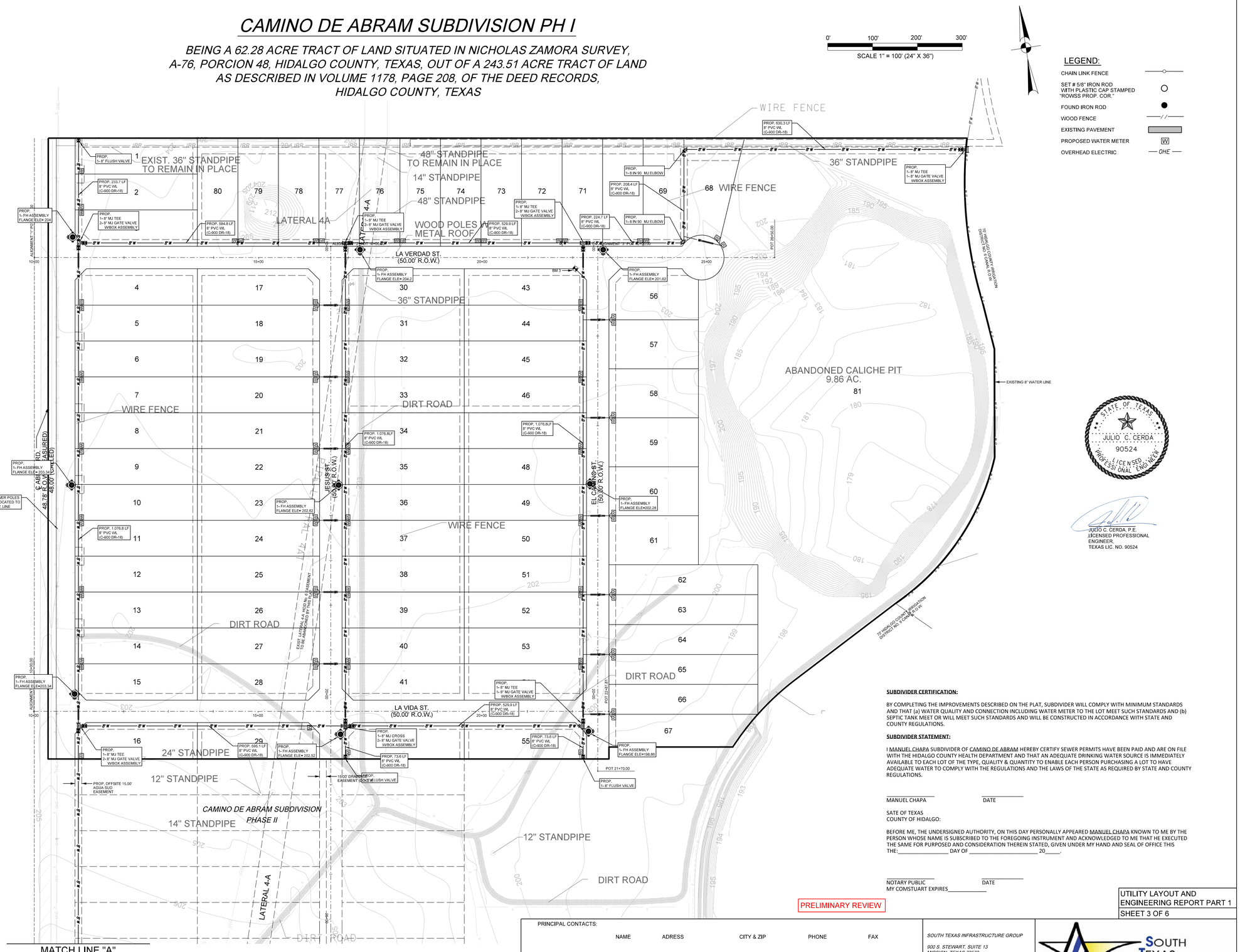
CADA LOTE EN LA SUBDIVISION PROPUESTA MIDE MÁS DE MEDIO ACRE. SE HICIERON DOS EXCAVACIONES DE EVALUACIÓN EN LUGARES OPUESTOS DE LA SUBDIVISIÓN, UN TOTAL DE 14 EXCAVACIONES DE EVALUACION FUERON REALIZADAS. (EXCAVACIONES ADICIONALES NO FUERON NECESARIAS PORQUE EL TERRENO EN ESTA ÁREA ES SIGNIFICANTEMENTE UNIFORME). EL TERRENO ES UNIFORME (TERRENO ARCILLOSO Y SUELO FRANCO) Y SE EXTIENDE A 36 PULGADAS BAJO TODAS LAS EXCAVACIONES PROPUESTAS. NO EXISTE EVIDENCIA DE AGUA 24 PULGADAS MÁS ARRIBA DE LO MÁS BAJO DE LAS EXCAVACIONES PROPUESTAS. EL AGUA EN ÉSTA ÁREA FLUYE BIEN.

EL COSTO TOTAL PARA LA INSTALACIÓN DE UN SISTEMA INDIVIDUAL DE FOSA SÉPTICA ES DE $_____ DÓLARES, INCLUYENDO EL COSTO DEL PERMISO REQUERIDO Y LICENCIA. EN ESTOS MOMENTOS TODAS LAS FOSAS SÉPTICAS HAN SIDO INSTALADAS EN EL PROCESO DE LA APROBACÓN FINAL A UN COSTO TOTAL DE $_____. EL DEPARTAMENTO DE SALUBRIDAD DEL CONDADO DE HIDALGO HA INSPECCIONADO Y HA APROBADO LA INSTALACIÓN DE LA FOSA SÉPTICA DESDE __/__/2017.

CERTIFICACION:

CON MI FIRMA, CERTIFICO QUE LOS SERVICIOS Y SISTEMAS DE AGUA Y DRENAJE, DESCRITOS EN ESTE DOCUMENT CUMPLEN CON LAS REGLAS GOBERNANDO LAS SUBDIVISIONES, ADOPTADAS EN LA SECCIÓN 16.343 DEL TEXAS WATER CODE (CÓDIGO DE AGUA DE TEXAS). CERTIFICO QUE LOS GASTOS PARA INSTALAR LOS SITEMAS DE AGUA Y DRENAJE SON:
AGUA- EL SISTEMA/SERVICIO DE AGUA SERÁINSTALADO Y COMPLETAMENTE CONSTRUIDO MENOS EL MEDIDOR MECÁNICO DE AGUA QUE COSTAR UN TOTAL DE $_____.
DRENAJE- SE ESTIMA QUE LA FOSA SÉPTICA COSTARA $_____.

_____ _____
JULIO C. CERDA, P.E. DATE



STATE OF TEXAS
JULIO C. CERDA
90524
LICENSED PROFESSIONAL ENGINEER

JULIO C. CERDA, P.E.
LICENSED PROFESSIONAL ENGINEER,
TEXAS LIC. NO. 90524

SUBDIVIDER CERTIFICATION:

BY COMPLETING THE IMPROVEMENTS DESCRIBED ON THE PLAT, SUBDIVIDER WILL COMPLY WITH MINIMUM STANDARDS AND THAT (a) WATER QUALITY AND CONNECTION INCLUDING WATER METER TO THE LOT MEET SUCH STANDARDS AND (b) SEPTIC TANK MEET OR WILL MEET SUCH STANDARDS AND WILL BE CONSTRUCTED IN ACCORDANCE WITH STATE AND COUNTY REGULATIONS.

SUBDIVIDER STATEMENT:

I MANUEL CHAPA SUBDIVIDER OF CAMINO DE ABRAM HEREBY CERTIFY SEWER PERMITS HAVE BEEN PAID AND ARE ON FILE WITH THE HIDALGO COUNTY HEALTH DEPARTMENT AND THAT AN ADEQUATE DRINKING WATER SOURCE IS IMMEDIATELY AVAILABLE TO EACH LOT OF THE TYPE, QUALITY & QUANTITY TO ENABLE EACH PERSON PURCHASING A LOT TO HAVE ADEQUATE WATER TO COMPLY WITH THE REGULATIONS AND THE LAWS OF THE STATE AS REQUIRED BY STATE AND COUNTY REGULATIONS.

_____ _____
MANUEL CHAPA DATE

SATE OF TEXAS
COUNTY OF HIDALGO:

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED MANUEL CHAPA KNOWN TO ME BY THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR PURPOSED AND CONSIDERATION THEREIN STATED, GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS THE:_____ DAY OF _____ 20____.

_____ _____
NOTARY PUBLIC DATE
MY COMSTUART EXPIRES_____

PRELIMINARY REVIEW

UTILITY LAYOUT AND ENGINEERING REPORT PART 1
SHEET 3 OF 6

PRINCIPAL CONTACTS:

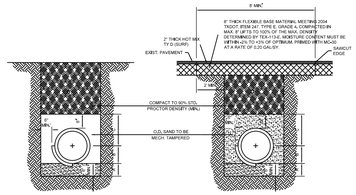
	NAME	ADRESS	CITY & ZIP	PHONE	FAX
OWNER:	MANUEL CHAPA	1801 MOZELLE ST.	PHARR, TEXAS 78577	(956) 778-3404	
ENGINEER:	JULIO C. CERDA, P.E.	900 S. STEWART RD., STE. 13	MISSION, TEXAS 78572	(956) 424-3335	(956) 583-7116
SURVEYOR:	KURT SCHUMACHER, R.P.L.S.	900 S. STEWART RD., STE. 13	MISSION, TEXAS 78572	(956) 424-3335	(956) 583-7116

SOUTH TEXAS INFRASTRUCTURE GROUP
900 S. STEWART, SUITE 13
MISSION, TEXAS 78572
PH: (956) 424-3355
FAX: (956) 583-7116
TBPE REG. # 1500

SOUTH TEXAS INFRASTRUCTURE GROUP

CAMINO DE ABRAM SUBDIVISION PH I

NOTE: WHEN UTILITY LOCATED WITHIN CITY R.O.W., ALL BACK FILLS SUBJECT TO INSPECTION AND APPROVAL BY THE CITY ENGINEER'S OFFICE



STANDARD PIPE BEDDING (MAIN & SERVICE LATERALS)

W-4

APPLICABLE BENEATH FUTURE/UNPAVED STREETS

A. SAND BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE. (MIN. THICKNESS = 6")

B. SAND BACK FILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE, 6" LIFTS. MECH. TAMPED.

C. SAND BACK FILL PLACED FROM SPRING LINE OF PIPE TO 6" ABOVE TOP OF PIPE, 8" LIFTS. MECH. TAMPED.

D. FILL TRENCH W/SELECT BACKFILL, W12" LIFTS COMPACT TO 90% STD. PROCTOR.

FOUNDATION PREPARATION (WELL POINTS, GRAVEL OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE):
SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

BACK FILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENTS AND COMPACTED TO APPROXIMATELY EQUAL DENSITY AS ADJACENT. THE THICKNESS OF EACH LOOSE LAYER SHALL BE SAND, APPROVED SITE SOIL OR OTHER APPROVED SUBSTITUTE.

NOTE: ALL EXISTING/ACTIVE STREET CROSSINGS SHALL REQUIRE SAND BACKFILL OF ENTIRE TRENCH. (SEE DETAIL 5/W)

STANDARD PIPE BEDDING (MAIN ONLY)

(PARALLEL WITHIN EXIST. STREET)

A. SAND BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE. (MIN. THICKNESS = 6")

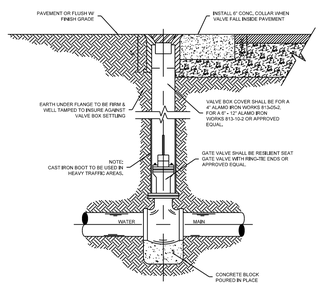
B. SAND BACK FILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE, 6" LIFTS. MECH. TAMPED.

C. SAND BACK FILL PLACED FROM SPRING LINE OF PIPE TO 6" ABOVE TOP OF PIPE, 8" LIFTS. MECH. TAMPED.

D. FILL TRENCH W/SELECT BACKFILL, W12" LIFTS COMPACT TO 90% STD. PROCTOR.

FOUNDATION PREPARATION (WELL POINTS, GRAVEL OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE):
SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

BACK FILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENTS AND COMPACTED TO APPROXIMATELY EQUAL DENSITY AS ADJACENT. THE THICKNESS OF EACH LOOSE LAYER SHALL BE SAND, APPROVED SITE SOIL OR OTHER APPROVED SUBSTITUTE.

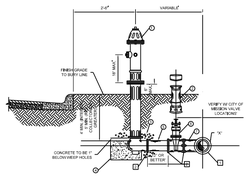


TYPICAL VALVE AND VALVE BOX INSTALLATION ON MAIN LINE

W-8

MUELLER (A-2360 SERIES) OR AMERICAN FLOW CONTROL (AFC-2500) ONLY

NOTE: ALL FITTINGS TO BE GREASED AND WRAPPED IN PLASTIC.



STANDARD FIRE HYDRANT INSTALLATION

W-7

MUELLER/SUPER CENTURION 250 A-423) OR AMERICAN DARLING B-84-B (SEE NOTE 4) ONLY

NOTE: FIRE HYDRANT TO BE PAINTED RED.

NOTE:

1.- OIL SHALL BE PLACED IN HYDRANT AT THE TIME OF INSTALLATION.

2.- PUMPER NOZZLE SHALL FACE ROADWAY, (0 1/2" N.A.T.)

3.- IN CERTAIN INSTANCES, WHER DEFLECTION FITTINGS, A PARALLEL TEE OR ANGLE FITTING IS USED, WIRESTRAINING LUGS MAY BE USED IN LIEU OF A STANDARD TEE, FINAL APPROVAL BY THE CITY OF MISSION REQUIRED.

4.- 8" AMERICAN DARLING B1 USED MODEL WITH 6" MECHANICAL VALVE PLATE AND INTERIOR SHOE.

5.- TAPPING SLEEVES TO HAVE STAINLESS STEEL BOLTS AND NUTS.

6.- ALL VALVES, FITTINGS & HYDRANTS & ACCESSORIES TO BE GREASED WRAPPED IN PLASTIC.

7.- ALL VALVES, FITTINGS AND ACCESSORIES, VALVE BOXES, METER BOXES AND HOUSES MUST BE APPROVED BY THE CITY OF MISSION.

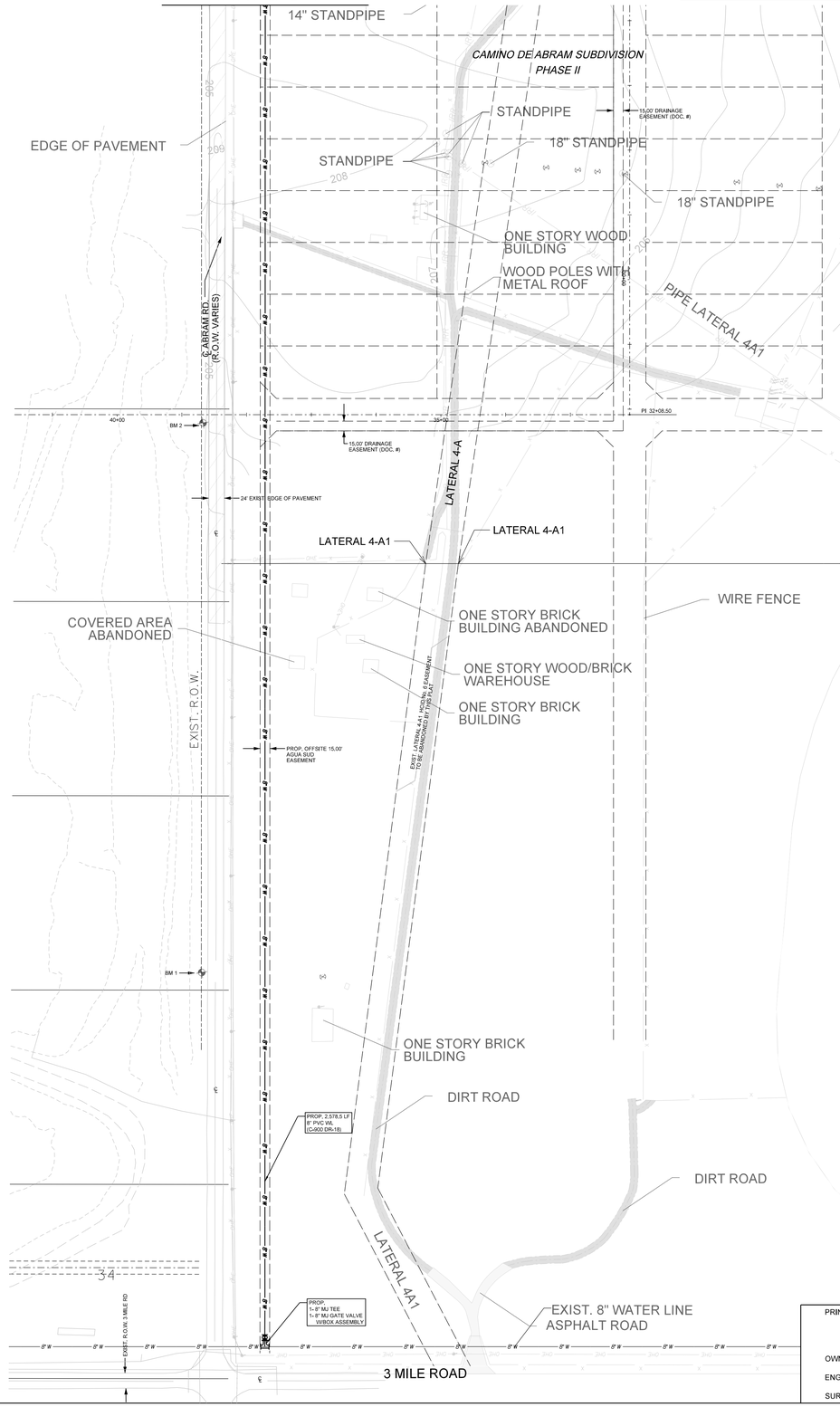
FIRE HYDRANT INSTALLATION
CONSIST OF FIRE HYDRANT, VALVE AND VALVE BOX

FIRE HYDRANT UNIT SHALL INCLUDE:

1.) FIRE HYDRANT w/ (4 1/2" PUMPER NOZZLE)
2.) 6" GATE VALVE (RESISTIC)
3.) 3 CU. FT. GRAVEL
4.) 3 CU. FT. CONCRETE 1' BELOW WEEP HOLES (MIN.)
5.) 6" DR BETTER PVC SPOOL'S
6.) 6" RESILIENT SEAT GATE VALVE (FLANGED X MJ)
7.) 6"x6" CAST IRON TEE (FLANGED X M.J.) "x" WATER MAIN DIA.

MECHANICAL JOINT
FLANGE

MATCH LINE "A"

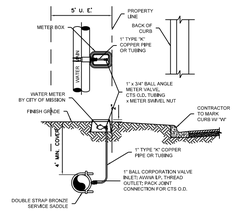


0' 100' 200' 300'

SCALE 1" = 100' (24" X 36")

LEGEND:

- CHAIN LINK FENCE
- SET # 5/8" IRON ROD WITH PLASTIC CAP STAMPED "ROWSS PROP. COR."
- FOUND IRON ROD
- WOOD FENCE
- EXISTING PAVEMENT
- PROPOSED WATER METER (W)
- OVERHEAD ELECTRIC — OHE —



NOTES:
1.- METER AND METER BOX TO BE PROVIDED BY CONTRACTOR, (MAL'S FAMILY ONLY).

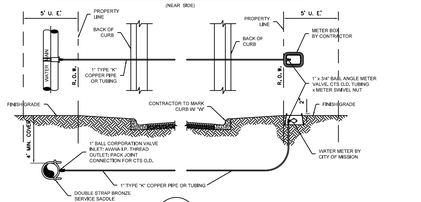
2.- FOR MORE THAN FOURPLEX OR FOUR COMMERCIAL BUBLEING USE 4" BALL CORP. VALVES, 4" TYPE "K" COPPER AND 8" PVC CASING.

3.- 4' MIN. COVER FOR WATER MAINS 7' MIN. FOR ALL ARTERIAL OR GREATER CLASSIFICATIONS.

4.- COMMERCIAL INSTALLATIONS TO BE 2" SINGLE SERVICE UNLESS OTHERWISE APPROVED BY CITY ENGINEER.

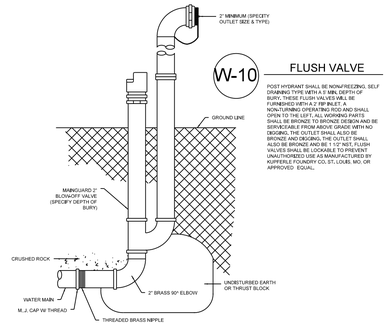
TYPICAL SINGLE WATER SERVICE CONNECTION

(NEAR SIDE)



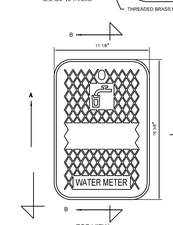
W-1A TYPICAL SINGLE WATER SERVICE CONNECTION

OPTION 1 (FAR SIDE)

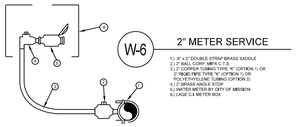


W-10 FLUSH VALVE

POST HYDRANT SHALL BE NONFREEZING, SELF DRAINING TYPE WITH A 2' MIN. DEPTH OF BURY. HYDRANT SHALL BE 6" MJ AND SHALL BE FURNISHED WITH A 2" PR WILEY NON-TURNING OPERATING ROD AND SHALL OPEN TO THE LEFT. ALL WORKING PARTS SHALL BE BRONZE TO BRONZE DESIGN AND BE SERVICEABLE FROM ABOVE GRADE WITH NO DIGGING. THE OUTLET SHALL ALSO BE BRONZE TO BRONZE DESIGN. THE BARREL ALSO BE BRONZE AND BE 1 1/2" NST. FLUSH VALVES SHALL BE LOCKABLE TO PREVENT UNAUTHORIZED USE AS MANUFACTURED BY KUPPERLE FOUNDRY CO, ST., LOUIS, MO. OR APPROVED EQUAL.

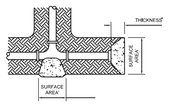


W-11 CAST IRON METER COVER



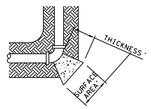
W-6 2" METER SERVICE

1.) 4" x 2" DOUBLE STRAP BRASS SADDLE
2.) 2" BALL CORP., MIPX C.T.S.
3.) 2" TYPE "K" COPPER PIPE (OPTION 1) OR 2" RIGID PIPE TYPE "K" (OPTION 1) OR POLYETHYLENE TUBING (OPTION 2)
4.) 2" BRASS ANGLE STOP
5.) WATER METER BY CITY OF MISSION
6.) LARGE C.A. METER BOX

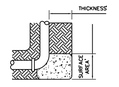


TEES & DEAD ENDS

VERTICAL BENDS



HORIZONTAL BENDS



HYDRANT BURYS

THRUST BLOCK SIZE

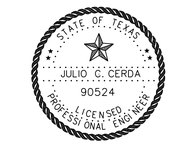
HORIZONTAL BENDS

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

NOTE:
ALL VALUES SHOWN ARE MBL FOR A HYDROSTATIC PRESSURE OF 150 P.S.I. AND A SOIL RESISTANCE OF 2,000 LBS. PER SQ.FT. WITH PIPELINE HAVING A MBL OF 3 FT. OF COVER WITH CURB & GUTTER AND A 5 FT. MBL WITHOUT CURB & GUTTER

W-5 THRUST BLOCKS DETAILS

NOTE: SEE THRUST BLOCK SIZE CHART FOR PROPER THICKNESS AND SURFACE AREAS



JULIO C. CERDA, P.E.
LICENSED PROFESSIONAL ENGINEER,
TEXAS LIC. NO. 90524

COST ESTIMATE
WATER DISTRIBUTION: $474,491.00
DRAINAGE IMPROVEMENT: $ 363,425.00
PAVING IMPROVEMENT: $ 604,685.37
SEPTIC TANK (OSSF): $121,500.00
FIRE HYDRANT: $40,500.00
EROSION CONTROL: $23,300.00

PRELIMINARY REVIEW

UTILITY LAYOUT AND ENGINEERING REPORT PART 2

SHEET 4 OF 6

PRINCIPAL CONTACTS:

	NAME	ADRESS	CITY & ZIP	PHONE	FAX
OWNER:	MANUEL CHAPA	1801 MOZELLE ST.	PHARR, TEXAS 78577	(956) 778-3404	
ENGINEER:	JULIO C. CERDA, P.E.	900 S. STEWART RD., STE. 13	MISSION, TEXAS 78572	(956) 424-3335	(956) 583-7116
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MISSION, TEXAS 78572
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TBPE REG. # 1500

SOUTH TEXAS INFRASTRUCTURE GROUP

DRAINAGE REPORT CAMINO DE ABRAM

PROJECT LOCATION
CAMINO DE ABRAM SUBDIVISION IS A PROPOSED 81 LOT SINGLE FAMILY RESIDENTIAL SUBDIVISION LOCATED WITHIN THE CITY OF MISSION 3 ½ MILE EXTRATERRITORIAL JURISDICTION (ETJ), BEING A 62.28 ACRE TRACT OF LAND SITUATED IN NICHOLAS ZAMORA SURVEY, A-76, PORCION 48, HIDALGO COUNTY, TEXAS, OUT OF PORTION A 130.465 ACRE TRACT OF LAND AS DESCRIBED IN IN VOLUME 1178, PAGE 208, OF THE DEED RECORDS, HIDALGO COUNTY, TEXAS, AND LYING WEST OF THE HIDALGO COUNTY IRRIGATION NO. 6 MAIN CANAL, CONVEYED BY SPECIAL WARRANTY DEED TO EVERARDO VILLARREAL DBA E&R CONSTRUCTION AND LIMAS VENTURES, LTD., AS DESCRIBED IN DOCUMENT NUMBER 2775191, OF THE OFFICIAL RECORDS OF HIDALGO COUNTY, TEXAS.

FLOOD PLAIN
THE PROPERTY IS IN ZONE X, AREAS DETERMINED TO BE OUTSIDE 500-YEAR-FLOOD-PLAIN; COMMUNITY PANEL NO. 480334 0290 D, REVISED JUNE 6, 2000.

SOIL CONDTIONS
ACCORING TO THE SOIL SURVEY REPORT PREPARED FOR HIDALGO COUNTY BY THE U.S.D.A. SOIL CONSERVATION SERVICE, THE SITE CONSISTS OF 0.2% OF BRENNAN FINE SAND LOAM (3), WITH 0 TO 1 PERCENT SLOPES, 60.6 % OF HIDALGO FINE SANDY LOAM (25), WITH 0 TO 1 PERCENT SLOPES, 16.8 % OF HIDALGO FINE SANDY LOAM (26), 1 TO 3 PERCENT SLOPES, 14.3 % OF HIDALGO SANDY CLAY LOAM (28) WITH 0 TO 1 PERCENT SLOPES, AND 8.1 % OF CUEVITAS-RANDADO COMPLEX (51), WITH 0 TO 3 PERCENT SLOPES. THESE SOILS ARE WELL DRAINED, SURFACE RUNOFF IS NEGLIGIBLE, PERMEABILITY IS MODERATELY HIGH TO HIGH, AND THE WATER CAPACITY IS HIGH. THIS SOIL IS LISTED IN HYDROLOGIC GROUP B. SEE APPENDIX C.

EXISTING CONDITIONS
THE SUBJECT PROPERTY IS CURRENTLY UNDEVELOPED. TOPOGRAPHIC ELEVATIONS OBTAINED FROM THE SITE INDICATE THAT THE EXISTING TERRAIN HAS A VERY SLIGHT GRADE APPROXIMATELY (0-0.8%). IN ACCORDANCE WITH THE DRAINAGE POLICIES OF THE CITY OF MISSION AND COUNTY OF HIDALGO, THE RATIONALE METHOD, 10-YEAR FREQUENCY STORM EVENT WAS UTILIZED TO DETERMINE THE EXISTING STORM WATER RUNOFF FOR THIS SITE. THE TOTAL CONTRIBUTING 10-YEAR EXISTING STORM WATER RUNOFF FROM THIS SITE IS APPROXIMATELY 47.95 CFS.

PROPOSED CONDITIONS
THE PROPOSED DRAINAGE SYSTEM SHALL CONSIST ON THE INSTALLATION OF AN INTERNAL STORM SEWER SYSTEM WITH INLETS IN THE STREET TO COLLECT SURFACE RUNOFF FROM LOTS AND STREET. THIS SYSTEM WILL HAVE PIPE SIZES RANGING FROM 24" TO 36". AND WILL ONLY HAVE ONE OUTFALL LOCATED IN LOTS 30, 31, 32, 33, AND 34, OF BLOCK 1, TEXAN GARDENS SUBDIVISION.
IN ACCORDANCE WITH THE CITY OF MISSION AND COUNTY OF HIDALGO DRAINAGE POLICY, THE PEAK RATE FOR RUNOFF FOR THIS DEVELOPMENT WILL BE MITIGATED TO THE EXISTING 10-YEAR STORM WATER RUNOFF. THE PEAK RATE WILL BE 108.26 CFS WHICH WILL GIVE US A NET INCREASE OF 60.31 CFS. A TOTAL OF 263,711 CUBIC-FEET, OR 6.054 ACRE-FEET OF STORM WATER RUNOFF WILL BE REQUIRED TO BE DETAINED. AS PER RANCHO EL POTRERO SUBDIVISION DRAINAGE REPORT, THESE 6.054 ACRE-FEET WILL BE DETAINED ON THE 6.43 ACRE DRAINAGE BASIN LOCATED ON THE EAST SIDE OF RANCHO EL POTRERO SUBDIVISION WITH A CAPACITY OF 80 ACRE-FEET.

JULIO C. CERDA, P.E. DATE

CAMINO DE ABRAM SUBDIVISION PH I

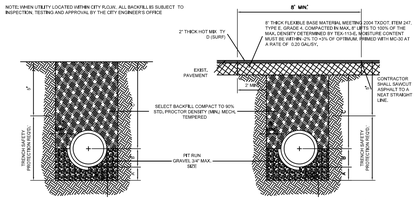
BEING A 62.28 ACRE TRACT OF LAND SITUATED IN NICHOLAS ZAMORA SURVEY, A-76, PORCION 48, HIDALGO COUNTY, TEXAS, OUT OF A 243.51 ACRE TRACT OF LAND AS DESCRIBED IN VOLUME 1178, PAGE 208, OF THE DEED RECORDS, HIDALGO COUNTY, TEXAS

0' 100' 200' 300'
SCALE 1" = 100' (24" X 36")

LEGEND:
- CHAIN LINK FENCE
- SET # 5/8" IRON ROD WITH PLASTIC CAP STAMPED "ROWSS PROP. COR."
- FOUND IRON ROD
- WOOD FENCE
- EXISTING PAVEMENT
- PROPOSED WATER METER (W)
- OVERHEAD ELECTRIC — OHE —

MATCH LINE STA. 22+00.00 (ALIGNMENT "2")

NOTE: WHEN UTILITY LOCATED WITHIN CITY R.O.W.: ALL BACKFILLS SUBJECT TO INSPECTION, TESTING AND APPROVAL BY THE CITY ENGINEER'S OFFICE



STANDARD PIPE BEDDING

UNDER EXISTING PAVEMENT OR PROP. PAVEMENT

A, GRAVEL (3/4" MAX. SIZE) BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE, (MIN. THICKNESS 4").

B, GRAVEL BACK FILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE, (4" LIFTS, MECH, TAMPED).

C, FILL TRENCH W/SELECT BACKFILL (FB-2D), W/12" LIFTS COMPACT TO 95% STD. PROCTOR

FOUNDATION PREPARATION (WELLPOINTS, GRAVEL AND/OR CEMENT STABILIZATION OR APPROVED SUBSTITUTE) SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

BACK FILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY. THE THICKNESS OF EACH LOOSE LAYER SHALL BE SAND APPROVED SITE SOIL OR OTHER APPROVED SUBSTITUTE.

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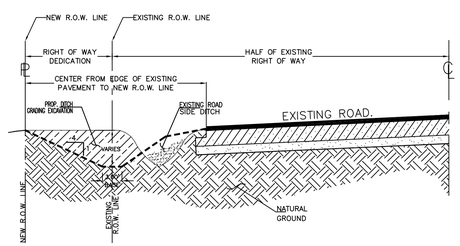
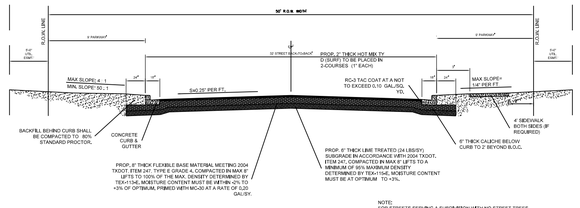
NOTE: ALL EXISTING STREET CROSSINGS SHALL REQUIRE SAND BACKFILL OF ENTIRE TRENCH.

D-8 STANDARD PIPE BEDDING - DETAILS



RECONSTRUCTION OF ROAD SIDE DITCH



NOTE:
FOR STREETS SERVING A SUBDIVISION WITH NO STREET TREES (LESS THAN 16 LOTS).

FLEXIBLE BASE (TYPE E GRADE 4) SHALL CONFORM TO THE FOLLOWING REQUIREMENTS, PRIOR TO THE ADDITION OF LIME:

Retained on Sq. Sieve	Percent Required
2"	0
¾"	30-60
No. 4	40-75
No. 40	70-90
Max. PI	15
Max. Wet Ball PI	15
Max Ball Mill Mas Amount	50

P-1 MINOR RESIDENTIAL STREET SECTION (32' BB - 50' R.O.W.) - DETAIL

PRELIMINARY REVIEW

PRINCIPAL CONTACTS:

	NAME	ADDRESS	CITY & ZIP	PHONE	FAX
OWNER:	MANUEL CHAPA	1801 MOZELLE ST.	PHARR, TEXAS 78577	(956) 778-3404	
ENGINEER:	JULIO C. CERDA, P.E.	900 S. STEWART RD., STE. 13	MISSION, TEXAS 78572	(956) 424-3335	(956) 583-7116
SURVEYOR:	KURT SCHUMACHER, R.P.L.S.	900 S. STEWART RD., STE. 13	MISSION, TEXAS 78572	(956) 424-3335	(956) 583-7116

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SOUTH TEXAS INFRASTRUCTURE GROUP

STATE OF TEXAS
JULIO C. CERDA
90524
LICENSED PROFESSIONAL ENGINEER

JULIO C. CERDA, P.E.
LICENSED PROFESSIONAL ENGINEER,
TEXAS LIC. NO. 90524

PAVING LAYOUT AND DRAINAGE DESIGN PART 1
SHEET 5 OF 6

CAMINO DE ABRAM SUBDIVISION PH I

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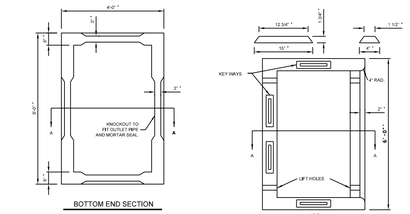
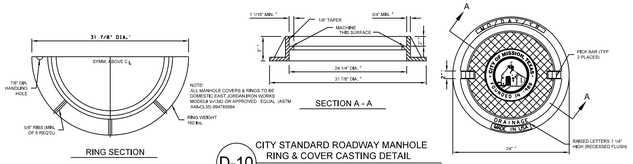
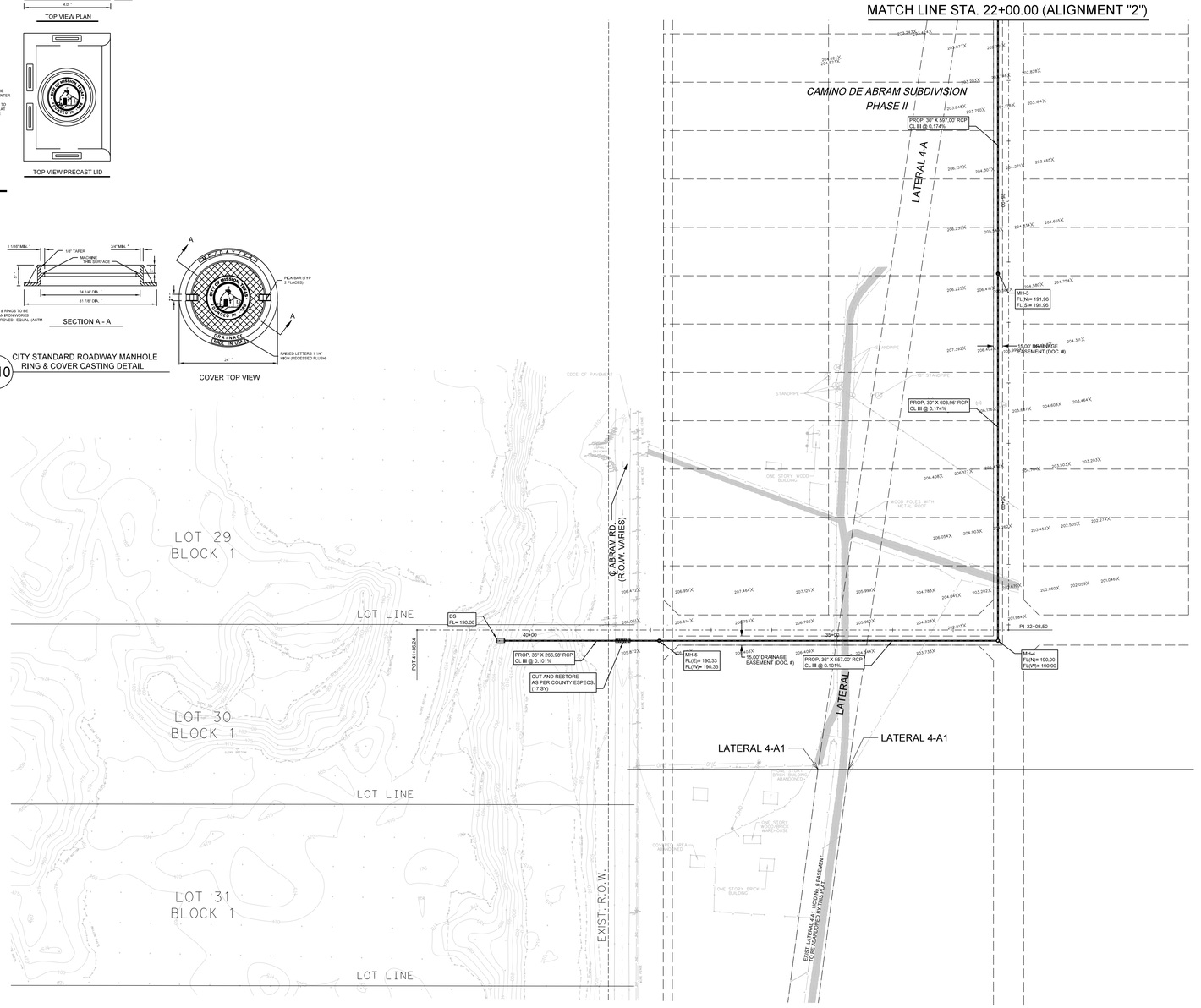


D-1 PRECAST TYPE "A" INLET



D-10 CITY STANDARD ROADWAY MANHOLE RING & COVER CASTING DETAIL

MATCH LINE STA. 22+00.00 (ALIGNMENT "2")



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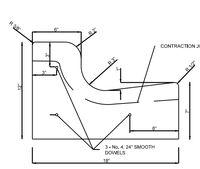


GENERAL NOTES:

1. CONCRETE SHALL BE 3000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAY.

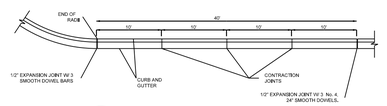
2. ALL CONCRETE WORK SHALL BE TREATED WITH MEMBRANE CURING COMPOUND TYPE 2 WHITE PIGMENTED IN ACCORDANCE w/ TEXAS DEPARTMENT OF TRANSPORTATION ITEM MATERIAL MATERIALS SPECIFICATION 526-4650. CONSIDERED INCIDENTAL TO CONCRETE WORK.

3. 1/2" EXPANSION JOINTS REQUIRED AT 40' c.c. AND AT THE BEGINNING AND END OF ALL RADII. CONTRACTION JOINTS SHALL NOT EXCEED 10' c.c.

4. EXPANSION JOINTS SHALL HAVE 1/2 EXPANSION JOINT MATERIAL AND 3 No. 4, 24" SMOOTH DOWEL BARS COATED TO PREVENT BOND.

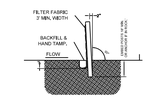
CURB AND GUTTER DETAIL

NOT TO SCALE



P-2 TYPICAL JOINTS

NOT TO SCALE



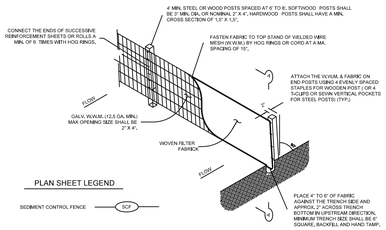
GENERAL NOTES

1. THE GUIDELINES SHOW HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A SEDIMENT CONTROL FENCE MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE TO BE FILTERED.

SEDIMENT CONTROL FENCE SHOULD BE SIZED TO FILTER A MAX. FLOW THROUGH RATE OF 100 GPM/FT., SEDIMENT CONTROL FENCE IS NOT RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA LARGER THAN 2 ACRES.



PLAN SHEET LEGEND

SEDIMENT CONTROL FENCE — SCF

P-15 TEMPORARY SEDIMENT CONTROL FENCE - DETAILS

STATE OF TEXAS
JULIO C. CERDA
90524
LICENSED PROFESSIONAL ENGINEER

JULIO C. CERDA, P.E.
LICENSED PROFESSIONAL ENGINEER,
TEXAS LIC. NO. 90524

PRELIMINARY REVIEW

PAVING LAYOUT AND DRAINAGE DESIGN PART 2

SHEET 6 OF 6

PRINCIPAL CONTACTS:

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