

REVIEW BY FORT BEND COUNTY COMMISSIONERS COURT

Fort Bend County

Engineering Department 301 Jackson Suite 401 Richmond, Texas 77469 281.633.7500 Permits@fortbendcountytx.gov

F	Right of Way Permit
x c	Commercial Driveway Permit
Permit	No: 2017-14016
Applicant: C4 Partners, LLC	
Job Location Site: 1217 1/2 Waters Lak	e Boulevard, Missouri City, TX 77459
Bond No. Date of B	ond: 5/30/2017 Amount: \$5,000.00
Laying, Construction, Maintenance, and Rej Roads, Streets, Highways, and Drainage Dito Commissioners Court of Fort Bend County,	ertain Fort Bend County property subject to, "The Order Regulating the pair of Buried Cables, Conduits, and Pole Lines, In, Under, Across or Along ches in Fort Bend County, Texas, Under the Jurisdiction of the Texas," as passed by the Commissioners Court of Fort Bend County, s Court of Fort Bend County, Texas, to the extent that such order is not exas Statutes and Codes Annoted.
grounds for job shutdown. 2. Written notices are required: a. 48 hours in advance of b. When construction is construction is construction.	oners Court must be kept on the job site and failure to do so constitutes construction start up, and ompleted and ready for final inspection, submit notification to Permit GovernmentOnline.org portal. date of permit if construction has not commenced.
On this 13th day of June, 2017, Upon Motion Commissioner Mokades notice of said above purpose is hereby acknowled that said notice be placed on record accord	_, duly put and carried, it is ORDERED, ADJUDGED AND DECREED that said nowledged by the Commissioners Court of Fort Bend County, Texas, and
Signature	Presented to Commissioners Court and approved.
By: Church O. Alf County Engineer	Date Recorded <u>6-13-2017</u> Comm. Court No. <u>14A</u>
N/A By:	Clerk of Commissioners Court By: Amila Walli
Drainage District Engineer/Manager	Deputy



PERMIT APPLICATION REVIEW FORM FOR CABLE, CONDUIT, AND POLE LINE ACTIVITY IN FORT BEND COUNTY

Fort Bend County Engineering Department 301 Jackson Suite 401 Richmond, Texas 77469

281.633.7500 Permits@fortbendcountytx.gov

X	Right of Way Permit	Down:	
<u> </u>	Commercial Driveway mit No: 2017-14016	Permit	
		e activity in Fort Bend County" and accompany opriate regulations set by Commissioner's Cou	
(1) COMPLETE APPLICATION FORM:			
X a. Name of road, street,	and/or drainage ditch affe	cted.	
X b. Vicinity map showing	course of directions		
X c. Plans and specification	S		
(2) BOND:		and the state of t	
County Attorney, approv applicable.	al when		
Perpetual bond currently posted.	Bond No:	Amount:	
X Performance bond subm	itted. Bond	Amount: \$5,000.00	
Cashier's Check	Check No:	Amount:	
(3) DRAINAGE DISTRICT APPROVAL	. (WHEN APPLICABLE):		
Drainage District Approval		Date	
We have reviewed this project and ag	ree it meets minimum req	uirements.	
Charles O. Al		<u>6/3/17</u>	
Permit Administrator		¹ Date	



4 PGS BOND 2017065918

PERFORMANCE BOND COVERING ALL CABLE, CONDUIT AND/OR POLE LINE ACTIVITY IN, UNDER, ACROSS OR ALONG FORT BEND COUNTY ROAD, COMMERCIAL DRIVEWAY AND MEDIAN OPENINGS OR MODIFICATIONS (AUTHORIZED)

BOND NO

THE STATE OF TEXAS

§

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF FORT BEND

§

THAT WE, <u>C4 Partners, LLC</u> whose address is <u>22803 Schiel Road, Cypress, Texas 77433</u>, hereinafter called the Principal, and <u>Liberty Mutual Insurance Company</u>, a Corporation existing under and by virtue of the laws of the state of <u>Massachusetts</u> and authorized to do an indemnifying business in the state of Texas, and whose principal office is located at <u>175 Berkeley Street, Boston, MA 02116</u>, whose officer residing in the State of Texas, authorized to accept service in all suits and actions brought within said state is <u>Christopher Raines</u> and whose address is <u>13201 NW Freeway, Suite 810</u>, <u>Houston, TX 77040</u>, hereinafter called the Surety, and held and firmly bound unto , Robert E. Hebert, County Judge of Fort Bend County, Texas, or his successors in office, in the full sum of <u>Five Thousand and 00/100</u> Dollars (\$ <u>5,000.00</u>) current, lawful money of the United States of America, to be paid to said Robert E. Hebert, County Judge of Fort Bend County, Texas, or his successors in office, to which payment well and truly to be made and done, we, the undersigned, bind ourselves and each of us, our heirs, executors, administrators, successors, assigns, and legal representatives, jointly and severally, by these presents.

THE CONDITION OF THIS BOND IS SUCH THAT, WHEREAS, the above bounden principal contemplates laying, constructing, maintaining and/or repairing one or more cables, conduits, and/or pole lines in, under, across and/or along roads, streets and highways, commercial driveway and median openings or modifications in the County of Fort Bend, and the State of Texas, under the jurisdiction of the Commissioners' Court of Fort Bend County, Texas, pursuant to the Commissioners' Court order adopted on the 1st day of December, A.D. 1980, recorded in Volume 13, of the Commissioners' Court Minutes of Fort Bend County, Texas, regulating same, which Commissioners' Court order is hereby referred to and made a part hereof for all purposes as though fully set out herein;

AND WHEREAS, the principal desires to provide Fort Bend County with a performance bond covering all such cable, conduit and/or pole line activity, commercial driveway and median openings or modifications;

NOW, THEREFORE, if the above bounden principal shall faithfully perform all its cable, conduit and/or pole line activity (including, but not limited to the laying, construction, maintenance and/or repair of cables, conduits and/or pole lines) in, under, across and/or along roads, streets and highways, commercial driveway and median openings or modifications in the County of Fort Bend and State of Texas, under the jurisdiction of the Commissioners Court of Fort Bend County, Texas, pursuant to and in accordance with minimum requirements and conditions of the above mentioned Commissioners' Court order set forth and specified to be by said principal done and performed, at the time and in the manner therein specified, and shall pay over and make good and reimburse Fort Bend County, all loss and damages which Fort Bend County may sustain by reason of any failure or default on the part of said principal, then this obligation shall be null and void, otherwise to remain in full force and effect.

This bond is payable at the County Courthouse in the County of Fort Bend and State of Texas.

It is understood that at any time Fort Bend County deems itself insecure under this bond, it may require further and/or additional bonds of the principal.

EXECUTED this 30th day of May, 2017.

C4 Partners, LLC

PRINCIPAL

Liberty Mutual Insurance Company

SURETY

BY Michael Madduy Attorney-in-Fact

CCM 6-13-17 #14A
Fort Bend County Clerk
Return Admin Serv Coord RAC

560

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Liberty Mutual Insurance Company The Ohio Casualty Insurance Company West American Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Araceli Martinez; Cynthia Jordan; Dudley C. Ray; James R. Reid; Judith M. Dold; Marie E. Novak-Hogan; Mark Lee; Michael Maddux

all of the city of Houston _, state of TX each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons,

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 24th day of March 2017

STATE OF PENNSYLVANIA COUNTY OF MONTGOMERY

guarantees.

loan, letter of credit,

or residual value

rate

for mortgage, interest

Not valid

SS

therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

The Ohio Casualty Insurance Company Liberty Mutual Insurance Company West American Insurance Company

Low David M. Carey, Assistant Secretary

2017, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussia, Pennsylvania, on the day and year first above written.



COMMONWEALTH OF PENNSYLVANIA

Notarial Seal Teresa Pastella, Notary Public Upper Merion Two., Montgomery County My Commission Expires March 28, 2021

Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

ARTICLE IV - OFFICERS - Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII - Execution of Contracts - SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-infact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this

Renee C. Llewellyn, Assistant Secretary

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123 of 300



TEXAS IMPORTANT NOTICE

To obtain information or make a complaint:

You may call toll-free for information or to make a complaint at 1-877-751-2640

You may also write to:

2200 Renaissance Blvd., Ste. 400 King of Prussia, PA 19406-2755

You may contact the Texas Department of Insurance to obtain information on companies, coverages, rights or complaints at 1-800-252-3439

You may write the Texas Department of Insurance Consumer Protection (111-1A)

P. O. Box 149091 Austin, TX 78714-9091 FAX: (512) 490-1007

Web: http://www.tdi.texas.gov

E-mail: ConsumerProtection@tdi.texas.gov

PREMIUM OR CLAIM DISPUTES:

Should you have a dispute concerning your premium or about a claim you should first contact the agent or call 1-800-843-6446. If the dispute is not resolved, you may contact the Texas Department of Insurance.

ATTACH THIS NOTICE TO YOUR POLICY:

This notice is for information only and does not become a part or condition of the attached document.

TEXAS AVISO IMPORTANTE

Para obtener informacion o para someter una queja:

Usted puede llamar al numero de telefono gratis para informacion o para someter una queja al 1-877-751-2640

Usted tambien puede escribir a:

2200 Renaissance Blvd., Ste. 400 King of Prussia, PA 19406-2755

Puede comunicarse con el Departamento de Seguros de Texas para obtener informacion acerca de companias, coberturas, derechos o quejas al

1-800-252-3439

Puede escribir al Departamento de Seguros de Texas Consumer Protection (111-1A) P. O. Box 149091

Austin, TX 78714-9091 FAX # (512) 490-1007

Web: http://www.tdi.texas.gov

E-mail: ConsumerProtection@tdi.texas.gov

DISPUTAS SOBRE PRIMAS O RECLAMOS:

Si tiena una disputa concerniente a su prima o a un reclamo, debe comunicarse con el agente o primero. Si no se resuelve la disputa, puede entonces comunicarse con el departamento (TDI)

UNA ESTE AVISO A SU POLIZA:

Este aviso es solo para proposito de informacion y no se convierte en parte o condicion del documento adjunto.

FILED AND RECORDED OFFICIAL PUBLIC RECORDS

Jama Richard



Laura Richard, County Clerk Fort Bend County, Texas

June 15, 2017 03:08:22 PM FEE: \$0.00 BAK

BOND

2017065918

CONSTRUCTION PLANS FOR LIFT STATION No. 4 AT SIENNA SOUTH LOCATED WITHIN SIENNA PLANTATION MUD No. 5 FORT BEND COUNTY, TEXAS

INDEX OF DRAWINGS

CIVIL & PIPING DRAWINGS

COVER SHEET
GENERAL LOCATION AND CONSTRUCTION NOTES
SITE GRADING, PAVING AND DRAINAGE LAYOUT
PIPING LAYOUT AND TABLES
PUMP CURVES
LIFT STATION DETAILS

MISSOURI CITY DETAILS

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WATER LINE, SANITARY SEWER FORCE MAIN BEDDING DETAILS DRIVEWAY CONSTRUCTION DETAILS

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SOLID STATE CONTROLLER
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DETAILS SHEET 2
DETAILS SHEET 2

Engineering and Surveying 9990 Richmond Avenue, Suite 450 N

CONTACT NUMBERS CITY OF MISSOURI CITY - PUBLIC WORKS DEPT -

SIENNA PLANTATION M.U.D. No.5 - OPERATOR - SI ENVIRONMENTAL -SIENNA PLANTATION M.U.D. No.5 - ENGINEER - COSTELLO, Inc. -

missouri CITY

Call before you dig.

281-403-8570

-713-783-7788

FOR RICHARD W. STOLLER P.E. 5/2/16

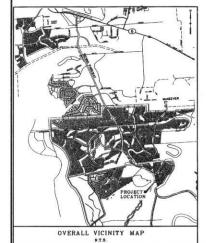
FORT BEND COUNTY ENGINEER

CITY OF MISSOURI CITY

Katherin M. Oatroff

4-21-2016

APPROVAL YOLD IF NO PROCRESS HAS BEEN MADE TOWARDS COMPLETION OF THE PROJECT WITHIN TWO YEARS OF DATE OF SIGNATURE.







JOB NO. 2015261 DATE: APRIL 2016

ATE: SPZILL

CENERAL NOTES

- CONTRACTOR SHALL CONTACT THE CITY OF MISSOURICITY ENGINEERING DIVISION 1281-261-42801, FORT BEND COUNTY ENGINEERING (281-633-7500). AND MR. CHAD HABLINSO (713-783-7881, 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTS
- CONTRACTOR SHALL GIVE COSTELLO, INC. (713-783-7788), THREE (3) WORKING DAYS NOTICE FOR CONSTRUCTION CONTROL STAKING, AND 48 HOURS NOTICE IN ADVANCE OF BECRINING CONSTRUCTION.
- AL USATOFACTORY MOJOR WASTE MATERIALS RELIGIOR STREPPORS, VICEITATION ROOTS, CONCRETE, CERROS AND LICEUSS ACCUMPNED SHALE IN MALES OF STREP OF THIS PROJECT OF THE STREPPORT OF THE STREPPORT ALL TREES ARE NOT RECORDED AND THE CONTRIBUTION PLANE. IT IS THE RESPONSIBILITY OF THE CONTRIBUTION TO VISIT THE STE AND DETRIBUTE OF THE CENTER OF THE RECORDED THE CONTRIBUTION PLANE.
- CONTRACTOR SHALL MANTAN ADEQUATE DRAWAGE AT ALL TIMES DURING CONSTRUCTION OF PROPOSED IMPROVEMENTS.
- EXISTING UTLITIES ARE INDICATED IN AN APPROXIMATE MANNER ONLY. ALL EXISTING UTLITIES MAY NOT BE INDICATED. CONTRACTOR SMALL VERRY LOCATION AND RELYATION OF EXISTING MERVOLWENTS PRORY TO CONSTRUCTION OF PROPOSED MERVOLWENTS, CONTRACTOR SMALL NOTIFY UTLITIES 48 HOURS PRORY TO CONSTRUCTION. CONTACT LEVIAG ONE. CALL 1819.
- ALL EXISTING LANDSCAPING IRRIGATION, SIDEWALKS FENCES LITEITIES AND OTHER EXISTING IMPROVEMENTS DIAMAGED DURING CONSTRUCTION WILL BE REPLACED OR REPLANED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR AT HS EXPENSE.
- 8. ALL WORK SHALL BE COMPLETED TO THE SATISFACTION OF THE CITY OF MISSOURI CITY, FORT BEIND COUNTY, THE ENGINEER AND THE OWNER.
- MANGLE BIN ELEVATIONS SHOW ON THE PLACE ARE APPROXIMATE. ALL FINAL BILLION OF THE PLACE ARE APPROXIMATE. ALL FINAL BILLION OF THE PLACE ARE APPROXIMATE. ALL FINAL BILLION OF THE PLACE ARE ARE APPROXIMATELY ALL EXISTING ANNOLESS BITHER OF ADACTOR TO THE PROJECT OF DE ADACTOR TO 4-APICES COVERS SHOULD A COMPLET ARESE WITH THE ELEVATIONS ON THE PLACE AND ADDRESS AND A COMPLET ARESE WITH THE ELEVATIONS ON THE PLACE AND ADDRESS AND ADDRESS
- 10. MAINTAIN A MINIMUM OF 6-INCHES OF CLEARANCE BETWEEN ALL UTILITIES.
- INCLUDE PRICE OF ALL BEDDING AND BACKFILL REQUIRED FOR SANTARY SEWERS AND FORCE MAIN IN PRICE BID PER LINEAR FOOT OF PIPE.
- UPON PROJECT COMPLETION AND PRIOR TO FINAL RELEASE OF RETAINAGE, CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF SECTION ENTITLED "PROJECT RECORD DOCUMENTS" OF THE CONTRACT.

- ANY CONSTRUCTION WHICH HINDERS TRAFFC OR REQUIRES TRAFFC DIVERSION SHALL BE IN ACCORDANCE WITH THE TEXAS MANUAL ON UNFORM TRAFFC CONTROL DEVICES. PLACE AND ADMINISTRATION OF THE REPORT OF THE REPORT
- POIRT TO EXCAVATION, THE CONTRACTOR SHALL STRP THE VEGETATION IN ALL MADES MEDIC EXCAVATION IS TO BE PERFORMED, WEIGH EXCAVATION MATCH.

 MEET TO BE DEPARTMENT, ALL MEETS, PROPOSED TO BE OSTURBED IN ANY FASHORM

 MEET TO BE STREPPED. STRPPRED IS DEFINED AS THE REMOVAL OF ALL CRASS AND THE ORGANIZED SHAPE TO ANY FASHORM.
- ALL EXCESS EXCAVATION SHALL BE HALLED OFF BY THE CONTRACTOR. INCLUDE THE COST FOR THE WORK IN THE CLEARING AND GRUBBING BD ITEM. UPON COMPLETION OF UTILITIES, STREPPING SHALL BE SPREAD AND GRADED SMOOTH, F DRECTED BY THE PROMINER IND SEPHRATE PAY).
- THERE WILL BE NO SEPARATE PAYMENT FOR WORK SHOWN ON THESE DRAWINGS, LINESS SPECIFICALLY ESTABLISHED IN THE CONTRACT BID DOCUMENTS.
- 22. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM THE CITY OF MISSOURICITY AND FORT BEND COUNTY.

- 25. TEST FLAMS, PRESEND BY CONTELLO, NO. DO LOT EXTEND TO ON INCLUSE EXCHOR ON SYSTEMS PERTAINED IN SERVICE SERVICE OF CONTRACTOR OF ITS SERVICES. SERVICES, AGAINS, ON REPRESENTANTS IN THE PREFIDENCE OF THE WORK THE SEA, OF THE STATE OF THE SEA OF THE S

- ALL COMPACTOR VIDEALS MILLIONS LIMPLOYEES VENUES, SHALL PARK WITHIN THE PROJECT STILL TO MANAGE THEFT OF THE PRIES STREETS, AUGMENT TO HE PROJECT STREETS, AUGMENT TO THE AUGMENT SUFFICIENT PARKING, WHATER TO THE AUGMENT SUFFICIENT PARKING, WHATER TO STREETS OR ESTENDED BY VEHICLES. AND PARKING WILL BE REPARED TO ORGANIC CONDITION PRORT TO COMPATION OF THE PROJECT, NO SEPHRATE PARKING WILL BE MORE FOR THE STREET.

- THE CONTRACTOR SHALL NOT OPERATE EXISTING WATER LINE VALVES UNLESS NECESSITATED BY EMERGENCY. ALL EXISTING WATER LINE VALVES MAST BE OPERATED BY THE OPERATOR.
- BORE PITS SHALL BE LOCATED NO CLOSER THAN 5-FEET FROM AN EXISTING BACK OF CURB UNDER ANY CIRCUMSTANCE.

- 35. THE CONTRACTOR SHALL PROVIDE A WATERTIDAT JOB BOARD NEAR THE SITE PREVENTIOR FAM. THE CONTRACTOR SHALL ALSO PROVIDE THE REQUERED SHARTADOR FAMILES. ALSO MOVINE THE REPORTED PROVIDE THE REQUERED SHARTADOR FAMILES. ALS
- If is the contractor's responsibility to contact the testing laborators to have the lab present during all backfill, placement of any fill or any other required lab testing.

SANITARY SEWER CONSTRUCTION NOTES

- BEDDING AND BACKFEL SHALL BE CONSDERED SUBSDIARY TO PAY ITEM FOR PIPE AND SHALL NOT BE PAND FOR DIRECTLY. ALL SANTARY SEWER LEADS CROSSING THE STREET SHALL BE CLASS "AN-EBOONG SELECT BACKFEL OF BETWEEN TO AND 20 SHALL BE USED FOR ALL SANTARY SEWER LOCATED ON SIDE LOT EASEMENTS. (NO SEPARATE PAY).
- ALL SANTARY SEWERS SHALL BE BACKFILLED IN ACCORDANCE WITH CITY DETAILS
- SANITARY MANHOLE COVERS SHALL BE STANDARD CITY OF MISSOURICITY (NOMINAL 32" DIA.) LABELED "SANITARY SEWER", AND SHALL MORCATE THE MISSOURICITY EMBL

- ALL SANTARY MANHOLES SHALL BE TESTED FOR LEAKAGE BY PERFORMING A LOW PRESSURE AIR TEST CONFORMING TO T.C.E.O. RULES.
- ALL EXISTING AND PROPOSED SANTARY SEWER MANHOLES WITHIN THE PROJECT SITE ARE TO BE PROVIDED WITH INFLOW PROTECTORS. THE IN FLOW PROTECTOR SHALL BE "NO FLOW IN-FLOW DISH" AS SUPPLIED BY CONTRACTOR SPECIALTIES IS SUPPLY CO., SAN ANTONIO, TEXAS (220) 497-6407 OR APPROVED EQUIAL.
- SAME ANY SERVEN SHAP, HE CONSTRUCTED HAN TISSID IN HOCKDOMERS WITH TO MESSORICE TO SECON STANDARD WITH LATEST SERVICES, MEMBRANES HE SOLD AND A 30-DAY. SPICAL PROVISIONS THERETO, UNLESS A VARMANCE OF DIFFARED, A 30-DAY. SALIDIOS PRINCE TO THE 30-DAY FORMERS, IRST, THE UTULITY CONTRACTOR MAY I. A MARGINE, PRICO TO THE 30-DAY FOR HE SOUNCE CONTRIBUTED, BUT WILL STALL SECOND STANDARD SERVEN SERVE
- 13. WHEN MANNER A CORRECTION TO AN EXISTRE SAMETARY SCREEN MANNER OR BULLONG A MANNER. ON AN EXISTRE SAME THE STREET FOR THE PLANT THE OWNERFACE AND FOR THE PROPOSED SAMETY SEWER USE. IT HIS PLUS SHALL REMAIN IN PLACE LITTLE FAMIL ACCEPTANCE, INCLUDE COST FOR THIS WORK IN OTHER ITEMS OF THE GID.
- THE FORCE MAIN SHALL BE HYDROSTATICALLY TESTED AT 125 PS FOR 8 HOURS, THE MAXBAM ALLOWARD, ELMACOF FOR FORCE MAINS SHALL BE 10.63 GALLOWS PER NICH OF NOMINL, PPE DUMETER PER MALE PER 24-ACOR PERDON MOST SHALL BE PROFABLED ACCORDING TO ACTUAL PIPE LEBOTHS AND NOMINAL DIAMETERS AND ADJUSTED FOR ACTUAL LINEATING OF THAT ESTATION.
- 16. ALL FORCE MAIN BENDS SHALL BE SUPPORTED WITH CONCRETE TRUST BLOCKING
- ALL DUCTILE INTO FORCE MAINS AND FITTINGS SHALL BE WRAPPED WITH A
 POLYETHYLENE FILM IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.

PAVING CONSTRUCTION NOTES

- PAYING SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL CITY OF MISSOURICITY REQUIREMENTS.
- TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT EACH CURB RETURN AND AT A MAXMEN SPACING OF 60.

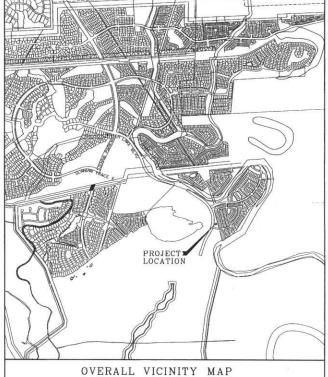
- JOINT SEALANT MUST BE ELASIOMETRIC TYPE, HOT POURED CONFORMING TO THOST ITEM 433 AND THOST DEPARTMENTAL MATERIAL SPECIFICATIONS D-9-6330.
- THE CONTRACTOR SHALL NOTEY FORT BEND COUNTY ENGINEERING DEPARTMENT (281-333-750)). THE CITY OF MISSOURICITY ENGINEERING DEPARTMENT (281-281-4 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF WORK, AND 24 HOURS PRIOR TO ALL TESTING OF PAYEMENT SUBGRADE AND PLACEMENT OF CONCRETE.

- FORT BEND COUNTY MUST BE INVITED TO THE PRE-CONSTRUCTION MEETING.
- CONTRACTOR SHALL NOTIFY FORT BEND COUNTY ENGINEERING DEPARTMENT
 48 HOURS PRIOR TO COMMENCING CONSTRUCTION AND 48 HOUR NOTICE TO
 ANY CONSTRUCTION ACTIVITY WITHIN THE LIMITS OF THE PAVING AT
 CONSTRUCTION ARE DETERMINED UNITYEE CITY.

- A CONTINUOUS LONGITUDINAL REINFORCING BAR SHALL BE USED IN THE CURBS.

- CURB HEADERS ARE REQUIRED AT CURB CONNECTIONS TO HANDICAP RAMPS, WITH NO CONSTRUCTION JOINT WITHIN 5' OF RAMPS

- STREET NAME SIGNAGE SHALL BE ON 9" HIGH SIGN FLAT BLAD W/REFLECTIVE GREEN BACKGROUND.
 STREET NAMES SHALL BE UPPER AND COWERCASE LETTERING WITH UPPERCASE LETTERS OF 6"MINIMAUN
 AND COWERCASE LETTERS OF A S'MINIMAUN. THE LETTERS SHALL BE REFLECTIVE WHITE. STREET NAME
 SIGNS SHALL BE MOUNTED ON STOP SIGN POST.
- A BLUE DOUBLE REFLECTORIZED BUTTON SHALL BE PLACED AT ALL FIRE HYDRANT LOCATIONS.
 THE BUTTON SHALL BE PLACED 12 INCHES OFF OF THE CENTERLINE OF THE STREET ON THE SAME SIDE AS THE HYDRANT



DESIGNED BY: _ DESIGN CHECKED BY DRAWN BY: __ COGO CHECKED BY: SURVEY CHECKED BY: QA/QC BY: _____ DATE: QA/QC REVISIONS BY: __

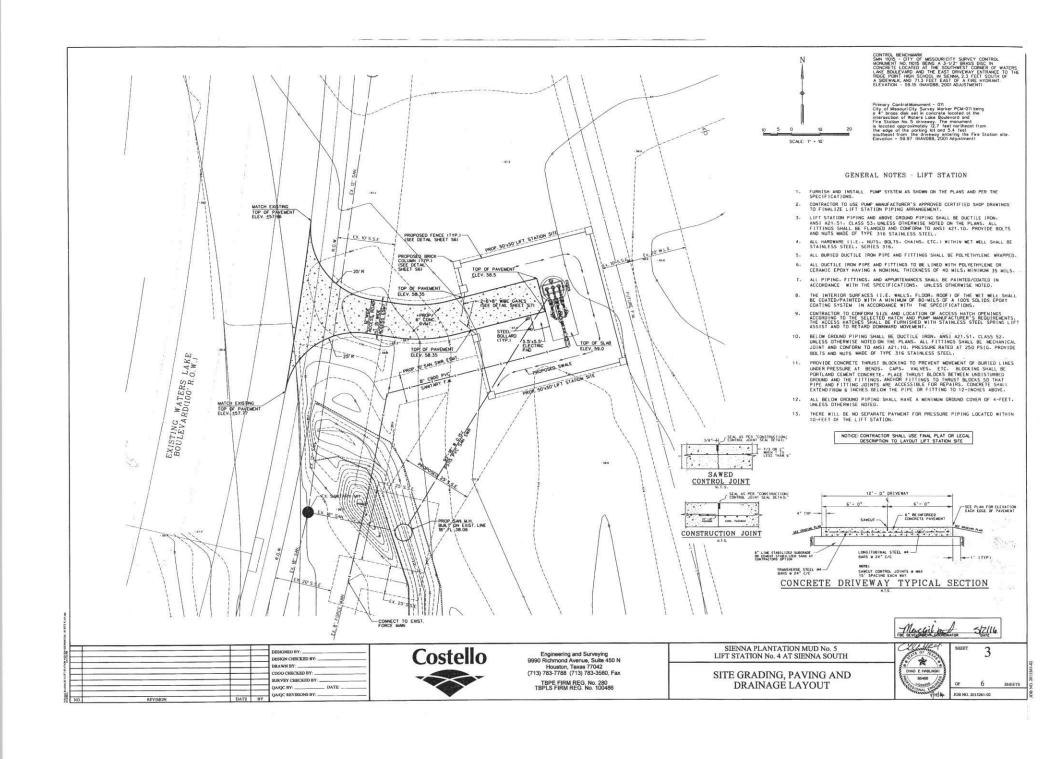


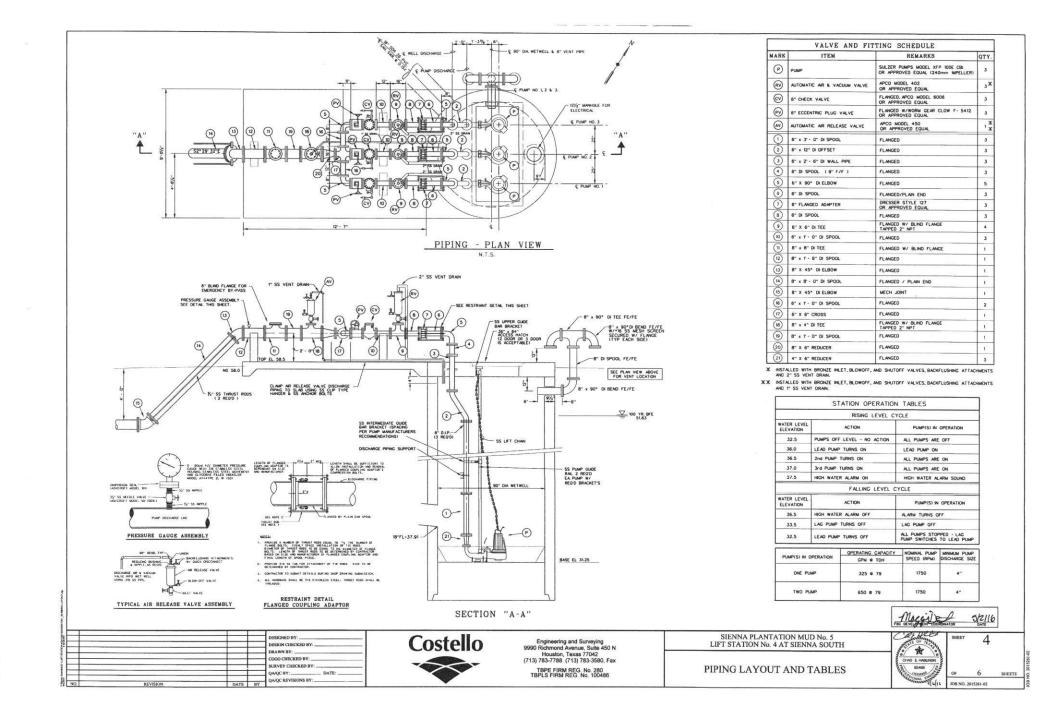
Engineering and Surveying 9990 Richmond Avenue, Suite 450 N Houston, Texas 77042 (713) 783-7788 (713) 783-3580, Fax TBPE FIRM REG. No. 280

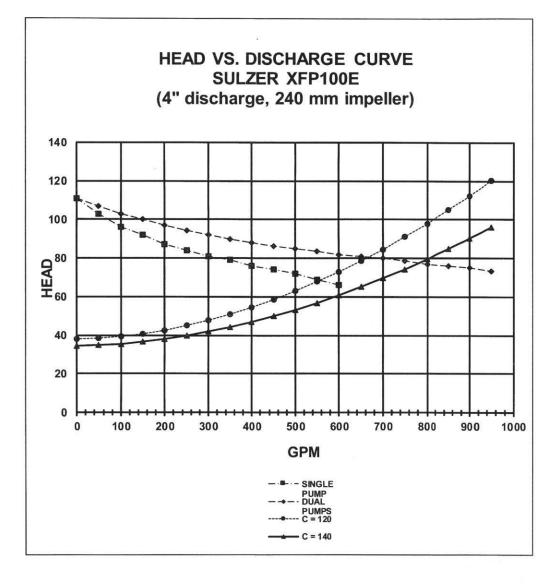
SIENNA PLANTATION MUD No. 5 LIFT STATION No. 4 AT SIENNA SOUTH

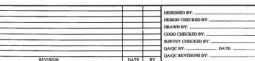
GENERAL LOCATION AND CONSTRUCTION NOTES









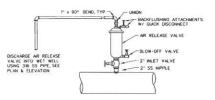




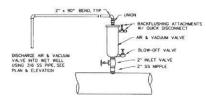
Engineering and Surveying 9990 Richmond Avenue, Suite 450 N Houston, Texas 77042 (713) 783-7788 (713) 783-3580, Fax TBPE FIRM REG, No. 280 TBPLS FIRM REG, No. 100486 SIENNA PLANTATION MUD No. 5 LIFT STATION No. 4 AT SIENNA SOUTH

PUMP CURVES

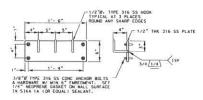




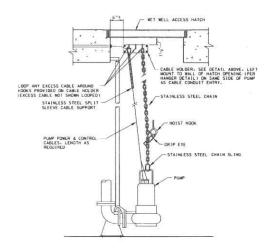
TYPICAL AIR RELEASE VALVE ASSEMBLY



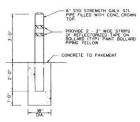
TYPICAL AIR & VACUUM VALVE ASSEMBLY



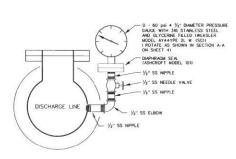
CABLE HOLDER ASSEMBLY



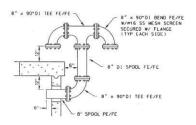
PUMP LIFTING & CABLING DETAIL



TYPICAL BOLLARD DETAIL



PRESSURE GAUGE ASSEMBLY



WET WELL AIR RELEASE VENT

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NO.	REVISION	DATE	BY	QA/QC REVISIONS BY:



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LIFT STATION DETAILS



M 5/2/16

GENERAL NOTES

- CONTRACTOR IS RESPONSIBLE FOR HAVING ALL BURIED UTILITIES (DENTIFIED, PROTECTED, REPLACED AND/OR PROPERLY REPAIRED IF DAMAGED. REPAIRS/REPLACEMENT SHALL BE AT CONTRACTOR'S EXPENSE.
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- BY CONTACTING THE ASSIGNED IMPRECISE.

 ALL SATIONARY PROSENED, BE REALED IN WITHING, WITH THE DEPARTMENT OF THEME OF COMES AT ANY MANY AND THE PROPERTY OF THE ASSIGNED IN THE DEPARTMENT OF THE ASSIGNED IMPRECISE AND AND THE ASSIGNED IMPRECISE ON ANY ADMITSTALL OF THE ASSIGNED IMPRECISE ON ANY ADMITSTALL OF THE ASSIGNED IMPRECISE ON ANY ADMITSTALL OF THE ASSIGNED IMPRECISE ON ASSIGNED IMPRECISE OF THE ASSIGNED IMPRECISE ON ASSIGNED IMPRECISE OF THE ASSIGNED IMPRECISE ON ASSIGNED IMPRECISE ON ASSIGNED IMPRECISE ON ASSIGNED IMPRECISE OF THE ASSIGNED IMPRECISE ON ASSIGNED IMPRECISE OF THE ASSIGNED IMPRECISE OF TH
- CITY. WE CONSTRUCT ON SALE (DEFENDED TO BE TEAK COMMISSION OF SWIDDWITER, CARLITY, ALLES, AND RELATIONS OFF PRINCIPAL STREET PSYSTEM, FOR CITY OF MISSIONAL PRINCIPAL STREET, AND THE CITY OF MISSIONAL STREET, AND THE CITY OF MISSION CITY OF MISSIONAL STREET, AND THE CITY OF MISS
- AL STATIONS ARE CENTERLINE OF STREET RICH-OF-WAY DRIESS, DIMENTES MOTEO ON THE FLANS COCCESS SHALL THAT AND STORM SERRE ARE PRESENT PARALLEL. STATIONS SHALL BE BASED ON CONTRIBUTED OF STORM SERRE PAPER.
- 8. ADGUATE GRAINAGE SHALLE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. ANY DRAINAGE AREA OR STRUCTURE DISTURBED. DURING CONSTRUCTION. SMALL BE RESTORED TO THE SATISFACTION OF THE CITY OF MISSOURICITY. ALL CONSTRUCTION STORM RUNOFF SMALL COMPLY WITH THE REQUIREMENTS OF C.O.M.C. STORM WATER TURLITY MANUAL. IF NON-COMPLIANCE DECURS. CONTRACTOR SHALL REMEDY IMMEDIATELY AT HIS OWN
- EATTHON.

 S. MAY POLITION CONTROL DEVICE. SOD. OR SEEDED AREA BANAGED. DISTURBED. OR REMOVED SHALL BE REPLACED OR REPLATED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR RELIEFED, MAY DEED OR SOO WHICH HE HAS NOTALLED UNIT, AMEDIATE REPORT HIS ACCURATE ORDER TO SO
- 10. STORM WATER POLLUTION PROTECTION SHALL BE DESIGNED. CONSTRUCTED. MAINTAINED AND SHALL BE IN TOTAL COMPLIANCE WITH THE STORM WATER QUALITY MANUAL OF THE CITY OF MISSOURI CITY
- 11. ANY MATERIALS ON KORMANSHIP NOT METING OF EXCELDING CITY OF MISSOURI CITY STANDARDS IS find solf responsibility of the contractor and will be repaired or replaced at the Contractor's Expense.

 12. THE CONTRACTOR SHALL KEEP THE STREETS. RIGHT-OF-MAY. AND WORK AREA CLEAN OF DIRT. MAID. AND DEBINE.
- 13. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL REQUIRED TRAFFIC SAFETY CONTROL DEVICES UP TO AND INCLUDING FLAGMEN OR POLICE OFFICERS. IF DEEMED NECESSARY BY THE CITY OF MISSOURI
- 14. THE CONTRACTOR SHALL CONTACT THE CITY OR LOCAL MAD AS APPROPIATE TO OPERATE EXISTING UTILITIES AND PRIOR TO MAKING TIE-INS.
- UTILITIES AND PRIOR TO MAKING TIE-INS.

 5. ALL BACKFILL WITHIN PUBLIC RICHTS-OF-MAY OR EASEMENTS SHALL BE ENGINEERED TO 95% STANDARD PROCTOR DEWSITY (IN 8. SACH LIFTS) AND TESTED FOR 25% OPTIMINUM BY AN APPROVED LAS.

 6. If IS PERMISSIBLE TO USE A BACKNOW FOR TRENCH EXCAVATION IN LIEU OF A TRANCHING MACHINE.
- 19. IT IS MEMBESSIBLE TO USE A BACKHOS FOR TRENCH EXCAVATION IN LIEU OF A TRENCHING MACHINE. IT. INC CONTRACTO SHALL MEMBER USE AND AN TRACKET-THE WHICLE OR EQUIPMENT ON ANY EXISTING. PAYEMENT OR CROSS DIFFE MY EXISTING PAYEMENT OR CURB. IR. ALL FIRSTS CRUCKS ARE TO CONTON TO A MINIMAN SLOPE OF 6° PER TOO FT. POSITIVE DRAIMAGE 15 DEPICTED BY AMOUS.

- COMPLICE.

 ALL FINISHED GRADES SHALL VART UNIFORMAT BETWEEN FINISHED ELEVATIONS.

 ALL RESING PROCEDURES SHALL COMPONE TO THE CITY OF MISSIONED CITY STANDAMOS. THE INITIAL

 EXCEPTION EXPENSE SHALL BE ROBING FOR THE CORRECT HIS ART OF THE LESS ON HOW MEET THE

 CHARGE SHALL BE AND THE CORRECT HOW COMPANY. THE CORP. THE SHALL

 MATERIAL, SO THE TESTING STANDAMOS CAN BE MET. ADDITIONAL RESTING TO MEET COMPLIANCE SHALL

 BUT ATTE CONTRACTOR'S SEPPRES.
- 22. CONTRACTOR SHALL PROVIDE SHEETING, SHORING, AND BRACING AS NECESSARY TO PROTECT NORMEN AND EXISTING UTILITIES DURING ALL PHASES OF CONSTRUCTION AS PER O.S.H.A. REQUIREMENTS.
- ALL MATERIALS AND SUCKMANSHIP SHALL CONFORM TO THE TADDI STANDARD SPECIFICATIONS. 2003. AND THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2000). AND ANY REVISIONS THERETO.

- THE CONTRACTOR SHALL BE RESPONDED FOR SAFECUMBERS AND PROTECTION CALL MATERIALS AND THE CONTRACTOR SHALL BE RESPONDED FOR THE CONTRACTOR SHALL BE ABOUNDED FOR THE CONTRACTOR SHAPEST LOWER, LOWER TO MAKE TO THE MATERIAL THE CONTRACTOR SHALL COLUMN FOR PROTECTION CHEST SHAPE LOWER TO MAKE TO THE MATERIAL THE CONTRACTOR SHALL COLUMN FOR THE COLUMN
- THE CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR FOR EXCAVATION, INSTALLATION, AND COMPLETION OF THE PROJECT AS SHOWN ON THE PLANS AND SPECIAL PROVISIONS TO COMPLY WITH CITY OF MISSIONING CITY STANDARDS.
- TO COMPANY REPORT OF MISSIONIC CITY STANDARD, THE OWN HE FACELY AND AND SPECIAL PROVISIONS OF PRIVATE UTILISES LLEE, PRIVATE CHIEF ILLE, LEE, CONTROLLER LLEE, LEE, CONTROLLER LLEE, LEE, CONTROLLER LLEE, CONTROL

CONCRETE/PAVING NOTES

- 1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND AUTHORIZATION REQUIRED BY CITY OF
- CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED PRIOR TO CONSTRUCTION AND WILL REPAIR OR REPLACE ANY DAMAGE AT CONTRACTOR'S EXPENSE.
- R. OCCURRY.

 B. OC
- . PAYING CONTRACTOR SHALL PROPRIE WAS MANIFALM SILT PROTECTION FOR SOME MANIFALS SILT PROTECTION FOR SOME SHALL SH
- EXISTING PAVEMENTS, CURBS, SIDEMALES, ORIVEWAYS, ETC., DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO THE CITY OF MISSOURI CITY STANDARDS AT THE CONTRACTOR'S EXPENSE.
- CONDITION OF THE WORK AREA (INCLUDING ROADS, RIGHT-OF-WAYS, ETC.) UPON COMPLETION OF THE JOB SHALL BE AS GOOD OR BETTER THAN THE CONDITION PRIOR TO STARTING THE WORK.
- THE JUST SHALL BE AS GOOD OR BETTER THAN THE CONSTITUTION PRIOR TO STAFFING THE ROPE.

 ALL DRIVENATS WILL BE LOCATED TO AVOID EXISTING CURB INECT STRUCTURES.

 O. REDWOOD AND KEVANTS SHALL NOT INTERSECT WITHIN 2 FEET OF AN INLET. CURB INLETS ARE NOT ALLOWED AT "TEE" INTERSECTIONS.
- NOT ALLOWED AT "THE "INTERSECTIONS.

 FLYSSE PRANGENT IS NOT ALLOWED IN THE CITY OF MISSIOURI CITY.

 ALL CONCRETE PLACED SHALL BE UNIFORMLY SPRAYED WITH A MEMBRANE CURING COMPOUND AS DISCRIBED IN TIEM 256 IN THE TABOH STANDAMD SPECIFICATIONS FOR CONSTRUCTION. IMPROPER APPLICATION MILL RESIDE. IN THE REJECTION OF THE CONSCRETE.
- 13. SIX (6) INCH. 5 SK. 3000 PSI 9 28 DAYS, REINFORCED WITH MA REBAR. 24" D.C. EACH MAY IS THE MINIMAM ACCEPTABLE CONSTRUCTION FOR RESIDENTIAL STREETS
- 14. SEVEN (7) INCH. 5 SK. 3000 PSI # 28 DATS, REINFORCED WITH MR REBAR. 24" D.C. IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR MAJOR COLLECTOR STREETS.
- 15. EIGHT (8) INCH. 5 5K. 3000 PSI @ 28 DAYS. WITH #4 D-C EACH WAY IS THE MINIMUM ACCEPTABLE FOR MAJOR THOROLOGICARE STREETS.
- MEN 6" COMMERCE PAYMENT INTERSECTS 7" PAYMENT, 7" PAYMENT SHALL BE CONSTRUCTED TO THE CANS OF ALL CUMB RETAINS.
 ALL RELINAS SHALL LAWS A MIN. 25 FT. RADIUS AT THE BACK OF CUMB UNLESS OTHERWISE NOTED.
- ALL INTERSECTIONS SMALL BE CONSTRUCTED WITH MHEELCHAIR RAMPS IN ACCORDANCE WITH THE TEXAS ACCESSIBILITY STANDARD. THE AMERICAN DISABILITIES ACT. AND THE CITY OF MISSOURI CITY
- 19. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED WITHIN EACH STREET RIGHT-OF-WAY IN ACCORDANCE
 WITH CITY OF MISSOURI CITY. THE A.D.A. AND THE T.A.S. STANDARDS (LATEST REVISIONS).
- 20. CHACKS 171-FERROR GELEGIER IN B. A.D. A.A. AND THE T.A.S. STAMBARDS (LATES REVISION).

 20. CHACKS 171-FERROR GELEGIER IN RIGH ACCEPTANCE IN NEW PAYMENT. ACCESS 171-FINCH OR
 LESS SHALL BE ADDRESSED OF AN INDIVIDUAL BASIS. SOUNCET ON PHYDRAL OR RECETION.

 21. PROPER TEXTER ON LAB DOCUMENTATION IS REQUIRED. FAILURE TO MAINT THE MINIMAL PROMISE
 RECEIVED TO THE CONTROL OF THE PROPERTY OF THE PROP
- 23. 4-CONCRET CT. INSURE, SLIGHT, AND ATE BETTAL INSURED ITS STATE EXQUISED FOR EACH TO THE AND ATE DESCRIPTION OF THE AND ATE OF THE ACCENT. THE CITY OF MISSIGNED CITY RESCRIPTS THE RIGHT TO ROUGEST MAY ADDITIONAL TESTS AT THE CONTRACTOR'S EXPRESS. THE ANY MATERIAL APPEARS BEING STANDARDS.

- COTTRECTOR'S EPECHG, IF ANY MATERIA. APPLASS BELOW STAGOMORY.

 2. No. 3 Highest and privace LCC, E.C. Y. S. THE MINIMAR ACTURAGE, FOR STORMARS.

 COMMERCIA. APPROXICES, MOMORIAN BAMPS, MESTIGNER, APPROXICES AND DIFFERENT.

 COMMERCIA. APPROXICES, MOMORIAN BAMPS, MESTIGNER, APPROXICES AND DIFFERENT.

 2. No. 10 HIGH PROXICES AND ACTURATION APPROXICES AND RESIDENT AND RESIDENT APPROXICES AND RESIDENT.

 2. NO. 11 HIGH PROXICES AND ACTURATION OF ACTURATION MATERIAL COTTOR MATERIAL CONTROLLED AND ACTURATION ACTURATION AND ACTURATION ACTURATION AND ACTURATION AND ACTURATION AND ACTURATION ACTURATION AND ACTURATION AND ACTURATION ACTURATION AND ACTURATION ACTUR
- OR ADDITION OF THE MEDICER HAS BEEN ADDED. NO CONCRETE SHALL BE PLACED IF MORE THAN 60 MINUTES PAST BATCH TIME. IF AIR AND WATER REDUCER HAS BEEN ADDED. NO CONCRETE SHALL BE PLACED IF MORE THAN 90 BINUTES PAST BATCH TIME.
- 28. STRUCTURE TEMPERATURES AND TIMING FOR CONCRETE PLACEMENT MAY VARY. REFER TO TXDO: STANDARDS TEM 420 FOR DETAILS.
- STANDARDS THAT HO FOR DEFENS.

 STANDARDS TERM HO FOR THE STANDARD HO STANDARD

- 31-MOVING MESH IS ALLOWED IN ANY CONCRETE WITHIN THE CITY LIMITS ON ETJ.
 32- ML. REBAR SMALL BE 1005 THEO. DYERLAPS SHALL BE COUNCE THED MINIMAN.
 33. MLL NEW CURB PRODURES 3,000 P.S.I. # 28-DAYS, AND A MINIMAN OF 1-B/CY OF APPROVED PROTYPICHE FIRE MESH.

CEMENT STABILIZED SAND

- NAME THAT AS A STATE AS A LEGAL WORKER

 1. ALL STABLISTS SAME SHALE BE AN MINISHEM BY J. SK. PIR CUBIC VARD.

 2. CEMENT STABLISZED SAME SHALE BE AN MINISHEM BY J. SK. PIR CUBIC VARD.

 3. EMINISHEM BY CEMONES SHAPEL'S SHALL BE MADE LOS HEALT. FOR SHALES PROJECTS.

 CLIT RESERVES THE RIGHT TO REQUIRE ADDITIONAL HISTS. AT THE CONTACTORS EXPERIENT

 IT IT IS DELEGAD MCCESSAMY.

 4. ART C.S.S. NOT MEXTEN CLIT OF MISSOURY CITY STAMONOS SHALL BE REMOVED TO BE A PROJECT OF THE MEMORY CONTACTORS FOR CLIS. SHAPES.

 4. ALL C.S.S. SHALL BE COMPACTED IN MAXIMMEN OF 8-INCH LITTS AND REQUIRED TO REACH A MINISHME BOOKET OF STATE OF THE MEMORY CONTACTORS FOR THE MEMORY CONTACTORS FOR THE MEMORY CONTACTORS FOR THE MEMORY CONTACTORS FOR THE MEMORY OF 8-INCH LITTS AND REQUIRED TO REACH

BANK SAND

HOT MIX ASPHALTIC BASE COURSE

- NO HOT MIX ASPHALTIC BASS, MAY BE INSTALLED UNTIL THE SUBGRADE HAS BEEN PROPERTY PREPARED AND TESTED AS PER ME PLANS AND SPECIAL OF MISSOURI CITY BEFORE AND ASSEMBLES SHALL BE INSPECTED MID APPROVED BY THE CITY OF MISSOURI CITY BEFORE AND BASS MATERIALS.
- ONE INDIVIDUAL TO THE MATERIALS. HANDLING, AND INSTALLATION SMALL COMPLY WITH TROOT STANDARDS FOR CONSTRUCTION OF HIGHARYS. STREETS, AND BRIDGES 1995 (SECTION 02711) AND ITS LATEST REVISIONS.

 3. HOT MIX ASPMALTIC MATERIALS SHALL BE AT TEMPERATURES BETWEEN 250°F AND 325°F. WHEN PLACED.

- MATERIALS MAY NOT BE PLACED IN WET CONDITIONS OR IF THE AMBIENT TEMPERATURE IS BELOW SOFF AND FALLING. MATERIALS MAY BE INSTALLED IF THE AMBIENT TEMPERATURE IS TAKEN IN THE SHADE AND IS 40°F AMB RISING.
- 5. PLACE BASE COURSES 4 INCHES OR GREATER IN INICAMESS IN TWO OR MORE LAYERS. EACH HAVING A COMPACTED THICKNESS OF NOT GREATER THAN 4 INCHES.
- MATTING A COMPACTED TRICOMESS OF NOT CREATED TRANK & INDICES.

 A BASE MATERIAL AND CREAT BY PACKED AGRICAN CLEAR TO STABLE DITTOCKS. SAW CUITTING.

 FOR CREATING IS REGISTED IN CASES OF CREATE AGREE OF CREATE.

 REGISTED COMPACTOR WILLIAM TO STABLE OF CREATE AGREE OF CREA

- 9. LINLESS OTHERWISE SPECIFIED. COMPACT DENSITY TO NOT LESS THAN 95% OF MAXIMUM POSSIBLE DENSITY.

- 10. A CERTIFIED LAW SMALL BE ON SITE AT ALL TIMES TO TEST AND PROPERTY
 DOCUMENT THE CONSTRUCTION METHODS AND DUALITY OF METERIALS.

 1 ALL MATERIALS AND MORRHANDERS SHALL DOCUMENT TO ALS THAN APPRIAL TIMESTUTE AND CITY
 OF MISSORIE CITY REQUIREMENTS. FAILURE TO COMPY THIL RESULT IN REJECTION OF SAID
 MATERIALS AND SICH SMALL BE REPLACED AT THE CONTRICTOR'S EXPERSE.
- MATTERS AND SHICH SHALL BE REPLACED AT THE CONTRICTOR'S CHARGE.

 2. DO HAT OF DIRECT TO THE CONTRICTOR CHARGE OF THE CONTRICTOR OF THE CON

ASPHALT - DILS AND EMULSIONS

- 1. CONTRACTOR SHALL VERIFY LINES AND GRADES AND THAT COMPACTED BASE IS READY TO SUPPORT
- BASE MATERIAL SHALL BE DRY AND THOROUGHLY CLEAN OF LOOSE MATERIAL PRIOR TO APPLICATION
- 3. DILS & EMALSION SHALL BE DISTRIBUTED EVERLY AND SMOTHLY UNDER PRESSURE INCESSARY FOR PROPER DISTRIBUTION.
 4. MAINTAIN REQUIRED SUPPACE COMDITIONS UNTIL ACCEPTED BY THE CITY OF MISSOURI CITY.
- . PRIME COAT SHALL BE M.C.-30, M.C.-TO OR E.P.R.1 PRIME AND SHALL COMPLY WITH TROOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS. STREETS. AND ORIGINS (1993) AND ITS LATEST
- 6. TACK COAT SHALL BE SS-1 AND SHALL COMPLY TO TXCOT, S.S.C.H.S. & B. (1993) AND ITS LATEST
- MINISTON A. C.—10 AND LYM-1 PRIME SHALL BE DISTRIBUTED AT A BATE OF _25 TO _15 CALLDON ALL COLOR AND ALL COLOR AND

LIMING SUBGRADE

- LIME SMALL BE A "SLURRY" AS PER TXDDI 260 UNLESS SPECIFICALLY RECOMMENDED BY THE CODIFICANCE. LEGISLER AND APPOWED BY THE PUBLIC OWERS ENGINEER.
 ALL LIME SLURRIES SHALL BE FURNISHED AT OR ABOVE THE MINIMUM "DRY SOLIDS" CONTENTS AS APPROVED BY THE ENGINEER.
- 3. SUBGRADES SHALL BE STABILIZED WITH A MINIMUM SIX PERCENT (6%) LIME BY WEIGHT.
 SIX INCHES (6°) THICK TO REDUCE PLASTICITY INDEX (PI) TO FIFTEEN (15) AS DETERMINED
 LIME SERVIS. ADD DR. PERCENT (1%) FOR FIELD VARIATION.
- 4. LIME DRY SOLID CONTENT TESTS SHALL BE CONDUCTED ON SITE, ONCE PER ONE-HUNDRED (100) TONS OF MATERIAL DISTRIBUTED, UMLESS OTHERNISE NOTED.

- THE SECONDED SHALL BE SHAPED AND GROUD IN COMPOSITION TO THE THE SECTIONS.

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 I WAS SA APPROVED BY THE CITY DESCRIPTION, I HAVE OFFICE SHALL NOT BE STATED WHEN THE ABILITIAN THE SECONDESS SECONDESS. SECONDESS AND FAIL THE SECONDESS SECONDESS SECONDESS AND FAIL THE SECONDESS SECO
- THE SUBGRADE MATERIAL AND SLURRY SHALL BE THORDUGHT MIXED, ORDUGHT TO THE PROPER MOISTURE CONTENT (+ OR 2) AND LEFT TO CURE USUALLY 3 DAYS (72 MS.) MINISUM AS APPROVED BY THE CITY ENGINEER.
- . AFTER CURING, THE SUBGRADE SHALL BE REMIXED UNTIL PULYERIZATION REQUIREMENTS ARE MET. AS PER TXXDIT.

 FEX-101-E. PART !!!.

- SIEVE TESTS SHALL BE CONDUCTED EVERY 150 LF ON ALTERNATING LAMES OF TRAFFIC OR EVERY 300 LF ON SIMOLE LAMES AS REQUIRED. AT LEAST DIRE TEST SHALL BE COMDUCTED ON EACH ROBOWAY OR CUL-DC-SAC.
- CONNICTED ON EACH REQUEST OF CO.-01-342.

 D. THE WITERIA SEALL & CARRED ON DISTINGED TO + OF -72 OPTIMAL PRIOR TO COMPACTION. COMPACTION OF MINIMAL RESIDENCY SHALL RECEIVE IMPOUNTING THE COMPACTION. COMPACTION OF MINIMAL RESIDENCY SHALL RECEIVE IMPOUNTING THE COMPACTION. COMPACTION OF MINIMAL RESIDENCY SHALL RECEIVE IMPOUNTING THE COMPACTION OF SEASON AND IN CONCOMING THE COMPACT OF LINES AND CHARLES OF THE PLANS TO SECTION OF THE COMPACT OF MINIMAL TO CONTITUDE OF THIS CONTINUE OF MINIMAL PRODUCTION OF THE TOTAL TO CONTITUDE OF THIS CONTINUE OF MINIMAL PRODUCTION OF THE CONTINUE OF

- DEMSITY AND MOISTURE TESTS SHALL BE RETAKEN.

 NO SUBCRADE SHALL BE COVERED WITH ANOTHER MATERIAL UNLESS APPROVED BY THE
 CITY OF MISSOURI CITY AND LIME DEPTH TESTS MAYE BEEN COMPLETED. LIME DEPTH TESTS
 MALL BE COMPUTED AT EVERY 150 LET OF ROADWAY ON ALTERNATING LAMES OR EVERT 300 LF OF SINGLE LANE. AT LEAST ONE TEST SHALL BE CONDUCTED ON EACH ROADWAY AND/OR CUR-OK-SAC.

GENERAL NOTES I



ROBERT UPTON. P.E.

CHAO E HABLINSK CRIHER

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SIENNA PLANTATION MUD NO.5 LIFT STATION NO.4 AT SIENNA SOUTH

J06 No.: SCALE: AS NOTED SUBMITTED: DATE: SEPTEMBER 2009

MC-1

 CONTRACTOR SHALL VERIFY ELEVATIONS AND GRADES AND THAT BASE COURSE IS READY TO SUPPORT IMPOSED LOADS.

 APPLY A PRIME COAT AS PER CITY OF MISSOURI CITY AND TXDOT STANDARDS. DO NOT APPLY TACK COAT UNTIL PRIMED BASE COURSE HAS CURED AND IS APPROVED BY THE CONSTRUCTION INSPECTOR.

4. TACK COAT SHALL COMPLY TO CITY OF MISSOURI CITY AND TXDOT STANDARDS.

5. DO NOT USE CUTBACK ASPHALT APRIL 16 THROUGH SEPTEMBER 15.

ASPHALTIC CONCRETE PAVEMENT

6. DO NOT PLACE ASPHALT WHEN AMBIENT TEMPERATURE IS BELOW 50°F AND FALLING. MIXTURE MAY BE PLACED WHEN AMBIENT TEMPERATURE IS 40°F AND RISING.

7. DN PUBLIC ROOMS. STREETS. AND RIGHT-OF-MAY. ASPINLT SHALL BE PLACED IN MAXIMAN 7-INCH LIFES. IN THE EYEST MORE THAN ONE LIFE IS REQUIRED. EACH LIFE SHALL BE COMPACTED. LIFE AND GIVEN ADEQUATE TIME FOR THE PREVIOUS LIFE TO CHEE AND DITY BEFORE THE NEXT LIFE IS PLACED. IF COMPLETELY CORD AND DRIED. A TACK COAT WILL BE REQUIRED EMERNE LIFES.

8. A CERTIFIED LAB SHALL BE ON SITE AT ALL TIMES TO TEST AND PROPERLY DOCUMENT THE CONSTRUCTION METHODS AND QUALITY OF MATERIALS.

 MOLLING PATTERNS SMALL BE ESTABLISHED BY THE CONTRACTOR. AS RECOMMENDED BY THE LAB. TO ACHIEVE THE MAINIMAL COMPACTION. THE SELECTED DOLL PATTERN SHALL BE FOLLOWED UNKESS CHANGES IN THE PLACEMENT OR MIXTURE OCCUR. WHICH AFFECT COMPACTION. COMPACTION OF 95% SHALL BE ACHIEVED.

10. ASPHALT SHALL NOT BE PLACED ON WET BASE.

11. NO "BIRDBATHS" ARE ALLOWED.

12. IF THE SURFACE RAVELS (SEPARATES), FLUSHES, RUIS, OR DETERIORATES IN ANY MANNER PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR WILL CORRECT THIS COMMITTION AT HIS EXPENSE TO THE SATISFACTION OF THE CITY OF MISSOORI CITY FLORINGEN.

13. THE CONTRACTOR SHALL PROTECT THE PAVEMENT UNTIL DIRECTED BY THE CITY ENGINEER TO OPEN SAID PAVEMENT TO TRAFFIC.

14. RIDE QUALITY SHALL COMPLY WITH TXDDT 17EM 585. "RIDE QUALITY FOR PAVEMENT SURFACES".

15. SPECIAL NOTE: CONTRACTOR, WHILE MAXIMIZING COMPACTION, SHALL USE CAUTION NOT TO "OVER-ROLL" ASPHALT. PAYMENT SIRELYCHEO OR OVER-ROLLED. WHERE COMPACTION IS BROKEN, SHALL NOT BE ACCEPTED AND SHALL BE REPAIRED OR REPLACED TO THE CITY ENGINEER'S SATISFACTION AT THE CONTRACTOR'S EMPRISE.

16. CORE SAMPLES SHALL BE TAKEN RANDOWLY AT A MINIMUM OF EVERY 300 LF PER LANE OF ROADWAY OR ONE PER EVERY 250 SO. 1D., MHICHEVER IS APPLICABLE AND SHALL BE STAGGERED RELATIVE TO TESTING SITES IN ABUTING TRAFFIC LANES.

17. ALL ASPHALTIC CONCRETE PAVEMENT REPAIRS SHALL BE SAN CUT TO FILL ASPHALT DEPIN. REFER TO ASPHALT, STABILIZED BASE, FLEXIBLE BASE, ASPHALT BASE, AND DILL AND EMULSION NOTES. ALL DAMAGED BASE AND SUBGRIBLES SHALL BE REMOVED AND REPLACED TO THE CITY'S ENDINERR SATISFACTION. AT THE CONTRACTOR'S EXPENSE. CONTRIBET OF SHALL BE RESPONSIBLE FOR ANY AREA DAMAGED DRING CONSTRUCTION. INCLUDING AREAS OUTSIDE THE DESIGNATION REPAIR.

STABILIZED CRUSHED CONCRETE

 TEST AND ANALYSIS OF AGGREGATE AND BINDER MATERIALS WILL BE PERFORMED IN ACCORDANCE WITH ASTMD 1557 AND ASTMD 4318. CEMENT SHALL BE ASTMC 150 TYPE I.

 ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES (1993) AND ITS LATEST REVISIONS AND CITY OF MISSOURIC ICTY STANDARDS.

3. PRIME COAT SHALL BE M.C. 30 OR EPR-1 PRIME.

4. DESIGN MIX FOR MINIMUM AVERAGE COMPRESSIVE STRENGTH OF 200 PSI IN 48 HRS. PROVIDE MINIMUM CLMENT CONTENT OF 2 SK PER TON OF MIX. CEMENT CONTENT MAY BE RAISED AT THE CONTRACTOR'S EXPENSE IF TESTS ON FIELD SAMPLES FALL BELOW 200 PSI.

 THREE SAMPLES SHALL BE MOXIDED EACH DAY FOR EACH 300 TONS OF PRODUCTION. COMPRESSIVE STRENGIN SHALL BE THE AVERAGE OF THREE TESTS FOR EACH PRODUCTION LOT. CONTRACTOR SHALL REPLACE. AT HIS DWN EXPENSE. ANY MATERIAL BELOW MINIMUM REQUIREMENTS.

 CONTRACTOR SHALL VERIFY LINES. GRADES. AND COMPACTED SUBGRADING AS READY TO RECEIVE MATERIALS PRIOR TO ITS PLACEMENT.

 CEMENT STABILIZED BASE MAY NOT BE PLACED IF AMBIENT TEMPERATURE IS 40°F AND FALLING. BASE MATERIAL MAY BE PLACED IF AMBIENT TEMPERATURE IS 35°F AND RISING.

8. MATERIAL MAY NOT BE PLACED IN LIFTS EXCEEDING 6 INCHES IN DEPTH. EACH LIFT SHALL HAVE DENSITIES TAKEN.

 CEMENT STABILIZED BASE MAY NOT BE STORED FOR LONG PERIODS. DELIVERY OF MATERIAL AND UTILIZATION SHOULD BE TIMED ACCORDINGLY. MAXIMUM TIME ALLOWED 3 HRS. FROM BATCH TIME TO HAVING BEEN INSTALLED.

10. CEMENT STABILIZED BASE SHALL NOT BE INSTALLED IN WET OR SOFT AREAS.

11. COMPACT TO MINIMUM DENSITY OF 95% OF MAXIMUM DRY DENSITY. UNLESS OTHERWISE INDICATED ON DRAWINGS. MOISTURE SHALL BE BETWEEN + OR -2% OPTIMUM AS DETERMINED BY ASTMO STATE.

12. AFTER COMPACTING FINAL COURSE. BLADE SURFACE TO FINAL GRADE. ANY IRREGULARITIES, WEAK SPOTS, AREAS OF EXCESSIVE WEINESS, OR SURFACE HAIR LINE CRACKING SHALL BE REPAIRED AND/OR REPLACED AT CONTRACTOR'S EXPENSE.

A CERTIFIED LAB SHALL BE ON SITE AT ALL TIMES TO TEST AND PROPERLY .
DOCUMENT THE CONSTRUCTION METHODS AND QUALITY OF MATERIALS.

14. COMPACTION TESTING WILL BE PERFORMED IN ACCORDANCE WITH ASTM D 1956 OR ASTM D 2922 AND ASTM D 3017 AT RANDOMLY SELECTED LOCATIONS AS DIRECTED BY CITY OF MISSOURI CITY CONSTRUCTION INSPECTOR.

15. A MINIMUM OF ONE CORE SHALL BE TAKEN AT RAMDOM LOCATIONS PER 300 LF PER LANE OF ROADWAY OR ONE PER 250 SQ. YD., HICHCYCER MAY APPLY AND SHALL BE STAGGERED RELATIVE TO TESTING SITES IN ABUTTING TRAFFIC LAMES.

16. CURE FOR A MINIMUM OF 7 DAYS BEFORE ADDING ASPHALT PAVEMENT COURSES

 COYES SURFACE WITH COMING MERGRANGS AT THE FOLLOWING BATES, MC-301.01 GAL. PER 50. TO., DR FREI-PRINCELOTS GAL. PER 50. YD. DO MOT USE CUTBACK ASPHALT APPLL IS OS SETTEMENTS. PROTECT THE MEMBRANE BY ALLOWING MEMBRANE TO FULLY CURE PRIOR TO PERMITTING TRAFFIC TO DRIVED WIT. 18. UNSTABILIZED CRUSHED CONCRETE MAY NOT BE USED ON PUBLIC STREETS. ROADS. OR RIGHTS-OF-WAY.

19. STABILIZED LIMESTONE BASE MAY BE SUBSTITUTED FOR STABILIZED CRUSHED CONCRETE IF SUBMITTED AND APPROVED BY CITY OF MISSOURI CITY ENGINER.

STORM SEWER NOTES

1. STORM SEWERS SHALL BE DESIGNED AND CONSTRUCTED WITH CITY OF MISSOURI CITY DEPARTMENT OF PUBLIC WORKS AND ENGINEERING STANDARD CONSTRUCTION SPECIFICATIONS AND IN ACCORDANCE WITH CITY OF MISSOURI CITY STANDARD DETAILS SHEET AND LATEST REVISIONS.

2. ALL PIPE STORM SEWERS SHALL BE INSTALLED, BEDDED, AND BACKFILLED IN ACCORDANCE WITH CITY OF MISSOURI CITY STANDARD DETAIL DRAWINGS.

3. ALL CEMENT STABILIZED SAND (C.S.S.) SHALL BE 2 SK PER CUBIC YO. AND MEET MINIMUM C.S.S. STANDARDS COMPACTED TO 95%.

4. ALL STORM SEWERS UNDER AND WITHIN TWO (2) FOOT OF PROPOSED OR FUTURE PAVEMENTS SHALL BE BACKFILLED AND COMPACTED WITH 2 SK C.S.S. TO BOTTOM OF SUBGRADE.

 ALL PROPOSED PIPE STUB-DUTS FROM MANHOLES ON INLETS ARE TO BE PLUCGED WITH 8" BRICK WALLS WITH FULL MORTAR HEAD AND BED JOINTS AND GROUTED WITH A MINIMUM OF 1/2-INCH MORTAR INSIDE AND DUTSIDE: UNLESS OTHERWISE MOTED.

6. AVOID TO MAXIMUM EXTENT, MANHOLES IN HANDICAP RAMPS.

7. ALL STORM SEWER MANHOLES SHALL BE OF MISSOURI CITT TYPE "C" LINESS DTHERWISE NOTED AND SHALL BE LOCATED A MINIMAM OF THREE (3) FEET BACK OF CURB. IF CONFLICT EXISTS, RACK OVER MANHOLE TO MISS PROPOSED CURB. (MAXIMAN PRACK OF 1-NICH PER COURSE OF BRICK-)

8. RIN ELEVATIONS SHOWN ON THE PLANS ARE APPROXIMATE DNLY. UTILITY CONTRACTOR SHALL ADJUST RINE LEVATIONS TO 0.4 FEET ABOVE THE FINISH GRADE AT EACH LOCATION AFFER CONTRACTOR AS COMPLETED FIRML GRADING. SLOPED FILE SHALL BE ADDED FOR STORM WATER DRAINGE AWAY FROM HAIM.

9. RIM ELEVATIONS SHALL BE PROPERLY ADJUSTED TO GRADE IN PAVEMENT AND SIDEWALKS. APPROVED BLOCKDUTS SHALL BE USED IN PAVEMENT.

 ALL STORM SEWER MANHOLE COVERS MUST INCLUDE "STORM SEWER" AND "DUMP NO WASTE", "DRAINS TO WATERWAYS" WITH CITY OF MISSOURI CITY EMBLEM.

11. MINIMUM STORM SEWER SIZE SHALL BE 24-INCH DIAMETER. ALL STORM SEWER PIPES 24" AND LARGER ARE TO BE REINFORCED CONCRETE PIPE AS WE 0-16 CLASS III. INCLUDING THEE LEADS CROSSING UNDER EXISTING OF REPORSED PROMEMENTS. ALL INCLUDE ILEADS SHALL BE 24" R.C.P. OR LARGER. ALL STORM SEWER PIPE SHALL BE RUBBER GASKELED. ALL COMPPIPE SHALL BE IN ACCORDANCE WITH C.O.M.C. PHYPROVED PRODUCT LIST AND STANDARD DETAILS.

12. CONTRACTOR SHALL VERIFY NATURAL GROUND SHOTS PRIOR TO MANHOLE CONSTRUCTION.

13. CONTRACTOR TO PROVIDE A MINIMUM OF 6-INCHES CLEARANCE AT STORM AND WATER LINE CROSSINGS AND A MINIMUM OF TWELVE (12) INCHES AT SANITARY SEWER CROSSING.

14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACKSLOPE DRAINAGE SYSTEM DISTURBED AS A RESULT OF HIS WORK.

15. ALL DITCHES SHALL BE RESTORED TO PROPOSED ELEVATIONS TO INSURE PROPER DRAINAGE. ALL DUTFALLS SHALL BE COMPACTED AND ALL DISTURBED AREAS SHALL BE RESEDED OR RESODDED WITHIN 10 WORKING DAYS OF EACH OCCURRENCE (IN SEPARATE PAY).

16. THE UTILITY CONTRACTOR SHALL BOUGH CUT ALL BOOSTIE SWALES IN PROPER ALLOWERT AND SLOPE TO WITHIN JOJE FL. OF THISH GRADE: THE PAYING CONTRACTOR, UPDN COMPLETION OF PAYING, SHALL COMPLETE FINAL GRADING ALLOWERT OF SWALES AND RESTORE ALL AREAS WITHIN RIGHT-OF-WAY FOR SEEDING OR SODDING AND EFETILIZATION.

17. REFER TO GENERAL NOTES AND C.S.S. NOTES.

SANITARY SEWER NOTES

1. SANITARY SERES. FORE MAINS, MANDLES, LIFT STATIONS AND HISTEMATER FREATMENT PLANTS SHALL BE OSSIGNED AND CONSTRUCTION SEP PIT HE COURSEANTS OF THE CITY OF MISSIBLE CITY INFRASTRUCTURE STANDARD AND CORRESPONDING STANDARD CONSTRUCTION OF CHAILS SHEETE AND AS PIT HE REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY "DESIGN CRITERIA FOR SERRACE SYSTEMS", SHOULD A CONTLICT ARTISE BETHER IN PROMISE IN PROPERTY OF CHECKED ON A PROPOSE CONSTRUCTION ORAPHOS AND/OR INFORMATION INCLUDED IN PROJECT SPECIFICATIONS. CITY OF MISSIBLE CITY INFRASTRUCTURE STANDARDS SHALL COURTM.

ALL MATERIALS AND PRODUCTS USED IN THE CONSTRUCTION OF SANITARY SEWERS, FORCE
MAINS, MANGLES, LIFT STATIONS AND MASTEWATER TREATMENT PLANTS SHALL COMPLY WITH
THE CITY OF MISSOURI CITY INFRASTRUCTURE STANDARDS AND THE CURRENT
APPROVED PRODUCTS LIST AS MAINTAINED BY THE DEPARTMENT OF

35 STACKS SHALL BE BUILT IN ACCORDANCE WITH THE CITY OF MISSIONE CITY STANDARD DETAIL DAMAND ROUBLEWAYS. EXACT LOCATION OF THE STACK SMALL BE SUPPLIED TO THE CITY ENGINEER OF MISSIONEN CITY BY THE PROJECT ENGINEER ON SEALED AS-BUILT DAMAINGS AT COMPACTION OF CONSTRUCTION. ALL STACKS SHALL BE INSTALLED WITHIN 3CF PLUMD RELATIVE TO VERTICAL PLANE AND WILL BE CAPPED AND TERMINATED AT A DEPIN OF A FEET DELOW FINISHED GRADE. MAKES, DIRENTIS OFFICIED BY THE CITY REFINEER.

4. EACH SANIIARY SERRE SERVICE LEAD STUB. PLUGGED WY BRANCH QUILET AND STACK SHALL BE MARKED WITH A PRESSURE TREATED 4 X # TIMEER AT THE LIKE OF CONSTRUCTION. BECOMING AT THE INVEST LELVATION OF THE STUB ON WE AND AT AN ELEVATION TWO FEET BELOW THE CAPPOL TERMINATION POINT OF THE STUD ON WE AND AT AN ELEVATION TWO FEET BECOMING THE STATE OF THE STUD OF THE

1. SANTARY SERIE MANNOLES SHALL BE CONSTRUCTED AS PER DIMARNOS INCOPPORATIO IN CITY OF MOSQUE CONSTRUCTION CENTLICS SERIES. SECON MANNELS SHALL BE CONSTRUCTED A MINIMAM OF ORE FOOT FROM BACK OF CURB ON CURB AND COTTER RODWARTS AND THREE FELT FROM DOCE OF TRAVELLED RODWARD ON TO THOSE THOROGOPARES NAVIOUR ON CONSIDERATION OF THE PROPERTY OF MANNOLES. ALL SANTIARY SERIE MANNOLES SHALL MAN CONTROL FROM CONTROL FOR THE PROPERTY OF THE PROPERTY OF

6. SANITARY SEREN MANIGE COVERS SHALL BE MINIMAR OF 32 INCRES IN DIAMETER. ALL SUCH MANIGE COVERS SHALL HAVE THE CITT OF MISSOURI CITY EMBLES HAND THE WOODS "MISSOURI CITY" AND "SANITARY SEREN" CAST IN RAISED RELIEF AS DEPICTED IN CITY OF MISSOURI CITY STANDARD CONSTRUCTION DETAILS SHEETS. 7. MANGLE FINE ELEVATIONS SHOWN ON FLANS AND APPROXIMATE DNLY. LITLLITY CONTRACTORS SHALL ADJUST FINE ELEVATIONS TO 0.4 FEET MADUE FINISHED CARBO, MAD 5. FEET MADUE NATURAL, CROUND WITHIN RIGHTS-OF-WAY AND EASTWRITS AT EACH MANNOLE LOCATION ATTER PAYEENT CONTRACTOR HAS COMPLETED FINAL GROUND. THE AREA ADJACENT TO SANITARY SEVER MANHOLE LOCATIONS SHALL BE GRADED ANAY FROM SUCH MANHOLES SO AS PREVENT ENTRY OF STORM MALER RADORS TO IN SANITARY.

9. TESTING OF SANITARY SEWERS, FORCE MAINS, MANURES, LIFT STATIONS AND WASTEWATER TREATMENT PLANTS SHALL BE CONDUCTED AS NOTED IN SANITARY SEWER CHAPTER OF THE CITY I MISSOURI CITY INFRASTRUCTURE STANDARDS AND AS PER THE ROUTINETURENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY "DESIGN CRITERIA FOR SEWERAGE SYSTEMS".

10. CONTRACTOR SMALL BE RESPONSIBLE FOR VERIFTING LOCATION OF ALL EXISTING UTILITIES PRIOR TO EXCAVATION. DURING THE COURSE OF ANY AND ALL CLEARING. GRUBBING. FILL, GRADING. EXCAVATION ON OTHER CONSTRUCTION. CONTRACTOR SHALL EXEMPLE THAT STORM DRAINAGE PATHWAYS ARE MAINTAINED AND REMAIN OPEN TO ENSURE POSITIVE DRAINAGE AND THAT SHALL CONVEYANCES ARE IN HETS.
SHALL BE PROTICTED FROM ENTRY OF SILT. TRASH, OEDRIS AND ANY SUBSTANCES DELETERIOUS TO THE STORM WERE STITED AND/OR MATERIANTS RECEIVING STORM MATER MORPS. CONTRACTOR SHALL AT COMPETION OF WORK, FILL LOW SPOTS AND CRADE ALL RICHTS-OF-MAY AND UTILITY EAST-BENT AND RECEIVED TO STORM FROM THE STORM FROM THE STORM FROM THE STORM FROM THE STAND FROM THE

11. ALL SANITARY SEVER PIPING AND BEDDING SHALL BE INSPECTED BY CITY CONSTRUCTION INSPECTOR FOR CONFORMACE WITH CITY INFRASTRUCTURE STANDARDS PRIOR TO BACKFILLING OF PIPING IN TRACH. CONTROL OF SHALL BY COURT PIPING INSTITUTE OF STATES OF SHALL BY SHAPE COME MAS NOTHFICE CONTROL OF A RESULTS OF PIPING INSPECTION ARE SALISFACTORY AND INATIONAL BACKFILLING AND EACH OF SHAPE AND INSPECTION AND SALISFACTORY SOCIETY AND INSPECTION SHAPE AND A SHAPE AN

WATER DISTRIBUTION NOTES

1. MATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE DESIDED AND CONSTRUCTED AS PER REQUIREMENTS OF THE CITY OF MISSIONE (CITY INFRASTRUCTURE STANDARDS AND CORRESPONDING STANDARD CONSTRUCTION DETAILS SHEETS AND AS PRIN THE REQUIREMENTS OF THE TEATS COMMISSION ON REVIOUS DEPARTMENT TO ME AND ADDRESS AND AND ADDRESS AN

2. ALL MATERIALS AND PRODUCTS USED IN THE CONSTRUCTION OF MATER MAINS, MATER SERVICE LINES AND ASSOCIATED APPRIESMANCES SHALL COMEN' WITH THE CITY OF MISSOURI CITY INFRASTRUCTURE STANDARDS AND THE CURRENT APPROVED PRODUCTS LIST AS MAINTAINED BY THE OEPATRICH OF PUBLIC WORKS.

3. ALL GATE VALVES INSTALLED BELOW GRADE SHALL BE OF NON-RISING STEM DESIGN.

A. ALL FIRE HYDRAYTS SHALL BE PAINTED AND/OR REPAINTED WITH GEO-361 POLYURETHANE EMAKEL MANNE ACTINED BY GEO-GLEN ENTERPRISES. INC.
SURFACE PREPAINTION SHALL INCLUDE REMOVAL OF DILES FOR DUTSTURK.
SURFACE PREPAINTION SHALL INCLUDE REMOVAL OF DILES FOR DUTSTURK.
AS FER MANNEACTURER'S RECOMMENDATIONS. PRIME BARE METAL WITH THE-251 SPECKY PRIME PROPERTY PRIME REPORT PRIME ROW WITH THE PERSON FOR THE PRIME OF THE PERSON FOR TH

5. WELDED STEEL PIPE SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF MISSOURI CITY INFRASTRUCTURE STANDARDS. CUTS. WELDS AND COATING APPLICATIONS MUST BE ACCOMPLISHED LOWER COMPRIBLED CONDITIONS AT THE PLACE OF FAMILICATION PRIOR TO DELIVERY AT THE JOB SITE. APPLICATION OF COATING AT THE JOB SITE IS RESTRICTED TO TO MINIOR TOUGH-PREPARED OF MILITIANS MONEY DAMAGED.

6. MINIMAN SEPARATION DISTANCES AS REQUIRED BY TCCD SECTION 317.13. 290. APPENDIX E MIST : MAINTAINED BEINGEN POTABLE WATER LINES AND SANTIANT SENES. FORCE MAINS. LIFT STATION SENES. SENES AND SANTIANT SENES SENES AND SANTIANT SENES SENES SENES AND SANTIANT SENES SENES STATEM SEPONDISTION. SERVES TO MOST LYST MADAGES FOR CONSTRUCTION REQUIREMENTS OF OTHER INSTALLATIONS WHERE DISTANCES ARE GREATHER THAN 9' ININE) FT. CANNOT BE MAINTAINED.

7. EACH WATER SERVICE LEAD STUB SHALL BE MARKED WITH A PRESSURE TREATED 4 x 4 TIMBER AT THE TIME OF CONSTRUCTION. BEGINNING AT THE INVERT ELEVATION OF THE STUB AND EXTENSIVES TWO FEET ABOVE THIS NEED CRADE. EACH TIMBER MARKER SHALL BE PAINTED BLUE AND LABBLED "POTABLE WATER" WITH PIPE SIZE NOTED.

 TESTING OF WATER MAINS. WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE CONDUCTED AS PER REQUIREMENTS OF AWWA C605-94. (SEE MOCITY STANDARDS).

9. DISINFECTION OF WATER MAINS, WATER SERVICE LINES AND ASSOCIATED APPURTENANCES SHALL BE CONDUCTED AS PER REQUIREMENTS OF AWAY CEST AND TECO. NO CONNECTIONES SHALL BE MADE TO EXISTING WATER LINES WITHIL MEM, "CONSTRUCTED WATER LINES HAVE BEEN THOROUGHLY DISINFECTED, TESTED, TLUSHED, AND SAMPLED AND CONNECTION HAS BEEN AUTHORIZED BY

10. CONTANTOR SMALL BE RESPONDED FOR YEAR PINTER COSTION OF ALL EXISTING UTILITIES PRIOR TO LECKARY TO SERVEN FOR COURSE OF ANY MAY ALL CLEARING. CROBBE THE AT THE CROSS TO SERVEN FOR ALL CROSS THE CROSS TH

11. ALL WATER PIPING AND BEDDING SMALL BE INSPECTED BY CITY CONSTRUCTION INSPECTOR FOR CONFORMANCE TO IMPRASTRUCTURE STANDARDS PRIOR TO BACKFILLING OF PIPING IN TREACH. CONTRACTOR SMALL NOT COME PIPING UNITED SMALL THAT ON THE PIPING UNITED THAT RESULTS OF PIPING INSPECTION ARE SATISFACTORY AND THAT BACKFILLING WAY BE ACCOMPLISHED. ANY PIPING INSTALLED AND BACKFILLOR WITHOUT INSPECTOR'S SPECIFIC APPROVAL SHALL BE UNCOVERED AT INSPECTOR'S DIRECTION AND INSPECTED ACCORDINGLY. 24-HOUR NOTICE REQUIRED.

m. GARE MCYISIDA

GENERAL NOTES 11

missoum CITY

DEPARTMENT OF PUBLIC WORKS
ROBERT UPTON, P.E.
BIRGETOR OF PUBLIC MORKSZCITY EMGINEER



CONSTRUCTION PLANS FOR:

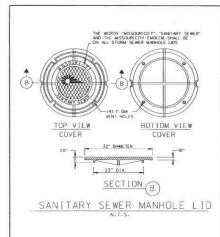
SIENNA PLANTATION MUD NO.5 LIFT STATION NO.4 AT SIENNA SOUTH

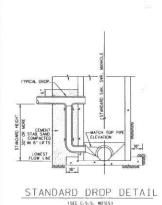
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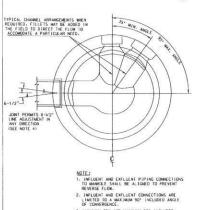
SCALE: AS NOTED SUBMITTED: DATE: SEPTEMBER 2009

MC-2

PIMSIBNIG SOUTHWALD 5 LIFT STATION 4M2015261 MDGN#2015261.08 LS4-MC-C







3. MINIMUM 35" AND MAXIMUM 90" INCLUDED ANGLES MAST BE PROVIDED BETWEEN MELTIPLE INFLUENT CONNECTIONS 4. ANGLE OF DEFLECTION AT PIPING JOINTS AS PER MANUA CELLUR'S RECOMMENSALIONS.

CONNECTIONS TO EXISTING AND/OR NEW SANITARY SEMER MANNO, ES CONSTRUCTED OF PRECAST CONCRETE NOT MAYING PRECORED HOLES OF CORNECT DIAMETER. LOCATION AND FIELD CORING ONLY SHALL ACCOMPLISH INVERT ELEVATION. IN NO INSTACK UILL ETITER MANNAL OR PREMATE CHISCLE. AND/OR HAMMER DRILLS BE UTILIZED TO BREAK HOLES IN PRECAST CONCRETE MANNOLES. PIPE SEGMENTS OR OTHER PRECAST STRUCTURES SUCH AS LIFT STATIONS.

1. CONTRACTOR SHALL CONTACT CITY OF MISSOURI CITY DEPARTMENT OF PUBLIC CONTRACTOR SMAL CONTRACT CITY OF MISSOURI CITY OFFATHAMY OF PRILIC MISSON AT LEAST 161-4000 IF WITH TWO MORE OF THE MISSON AT LEAST COUNTRIES.

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CONTROL SHART SHART MANULES SHALL BE CONSTRUCTED A WINIMAM OF FOR FOOT FROM BACK OF CARE ONE OF CARE AND CONTROL RECOVERY AND THAT FROM FOX OF THATLESS OF THAT FROM FOX OF THATLESS OF THAT FROM FOX OF THATLESS OF THAT FROM FOX OF THAT FROM FOX

INCOMPORATE INFLOM PHOTECTORS.

MANADOL RIM REVATIONS SOURCE ON THE PROPERTY TO THE CHEY.
CONTRACTORS SMALL ADJUST RIM ELEVATIONS TO 0.4 FEET ABOVE FINISHED
GRADE WITHIN RIGHTS-OF-WAY, AND EASEMENTS AT EACH MANHOLE LOCATION
AFTER FIRML GRADING. ADJUSTMENTS TO MANHOLE RIM ELEVATIONS SMALL BE

NOTES:

B. BEDDING AND BACKFILL OF SANITARY SEWER PIPING AND MANNOLES SHALL BE ACCOMPLISHED IN ACCORDANCE WITH CITY OF MISSOLAIE CITY INFASTMULTURE STANDANDS. A TWO-SACK MIK IS REQUIRED FOR ALL CEMENT STABILIZED SAND BEDDING AND SACH BEDDING SHALL BE INSTALLED IN LITTS OF EIGHT INNEXS

9. SOLVENT WELDED JOINTS ARE NOT AN ACCEPTABLE JOINING METHOD FOR SOURCE RELOW DIVISION FOR MINI ALCEPTARE, DIVINING METHOD FOR MITHIN RELATION OF MINI REPORT OF THE MINISTRY OF THE MINI REPORT OF THE MINI REPORT OF THE MINI REPORT OF THE MINI REPORT OF THE MINISTRY OF THE MINISTRY

10. SANITARY SEWER SERVICE LEADS SHALL BE EXTENDED TO RIGHTS-OF-WAY AND/OR EASTWENT LINES AS APPLICABLE AND CAPPED/PLUGGED FOR FUTURE CONNECTIONS. SERVICE LEADS ARE TO BE INSTALLED SO AS TO PASS UNDER PDIABLE WATER PIPING AT CROSSINGS WHERE POSSIBLE.

POTABLE WAILE PIPIER AT CODSTRICK PROFITS.

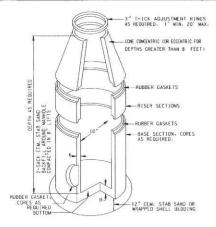
IN EACH SMATHERY SERR SERVICE LEGS THE PROGRAM.

IN EACH SMATHERY SERR SERVICE LEGS THE PROGRAM TO BROWNED OFFITE MOS STACK SHALL BE WANTED WITH A PRESSURE TREATED & A CIT THERE AT THE CITY CONTINUE AND A STACK SHALL BE WANTED WITH A PRESSURE TREATED & A CITY THE STAR OF WAITED THE STACK OF WAITED WAS AND A CITY THE STACK OF THE CAPTURE OF THE STACK SHALL BE PROTECTED FROM CHITY OF SILT, TREATH, CERRITS AND ANY SUSTAINCES DELETRICIS IN THE STORM SHEER SYSTEM AND WATER HARVES AND WATER HARVES. SOME HARVES HARVES SECRETARY SHEER STATE AT ALL OF STORM HARVES HARVES AND CHIEF AND CHIEF

POURED IN PLACE MANHOLES REQUIRE THE SPECIFIC APPROVAL OF THE CITY OF MISSOURI CITY ENGINEER.

15. C.S.S. 1' ABOVE PIPE AND 6" BELOW PIPE MINIMUM.

16. SEE GENERAL NOTES AND C.S.S. NOTES.



NOTES

1. LIFTING INSERTS AS REQUIRED. 2. ALL JOINTS SHALL BE SEALED WITH APPROVED RUBBER CASKET

3. STRUCTURE TO BE PLACED ON 12" STABILIZED BASE.

4. C.S.S. SHALL BE BROUGHT TO WITHIN 2-FT OF TOP OF MANHOLE.

PRE-CAST MANHOLE SHALL BE IN COMPLAINCE APPROVED PRODUCT LIST.

6. THANE COAT SHALL BE IN COMPLANCE WITH APPROVED PRODUCT LIST.

INVERTS SHALL COMPLY WITH C.O.M.C.. INFRASTRUCTURE DESIGN MANUAL SPECIFICATIONS.

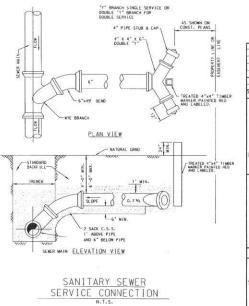
8. INFLOW PROTECTORS REQUIRED ON ALL SANITARY MANHOLES.

REFER TO SANITARY MANHOLE LIDS, C.S.S. NOTES, MODIFIED BEDDING DETAILS AND NOTES.

PRECAST SANITARY MANHOLE N.T.S.

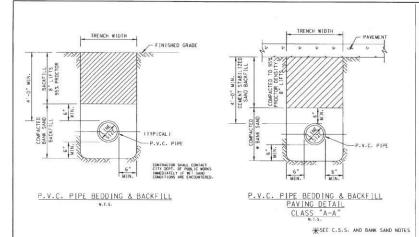
NOTES: A.) NO STACKS ON MAINS OVER 16' DEEP or THREADED SEWER PIPE PLUG IN RUBBER GASKETED PIPE BELL IN WET SAND CONDITTIONS. B.1 ALL STACK CONNECTIONS SHALL IN-LINE FITTINGS. TREATED 4"X4 TIMBER MARKER PAINTED RED FINISHED GRADE FINISHED GRADE TREATED 4"X4" MBER MARKER PAINTED RED 6 -0" BACKFILL W/Z.O SACK C.S.S. PER C.Y. STABILIZED SANI FOR WIDTH OF 1.50 4 P.O SACK C.S.S. PER CUBIC YARD STABILIZED BACKFILL TRENCH BOTH DIRECTIONS. 14 6"x45" BEND 4.4 2.0 SACK C.S.S. PER CUBIC YARD STABILIZED SAN 4.6 TRENCH TRENCH SIDE VIEW END VIEW STACK DETAIL

N.T.S.





MD 5/2/16

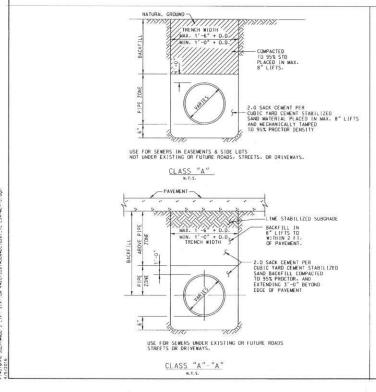


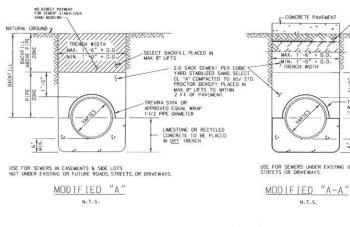
#7 @ 8" rt2" CLR. FROM BOTTOM) #4 @ 12" 4" VOID FORM C-C EACH WAY 1'-0" 3'-3" 6" PROTECTIVE SLAB DETAIL ZERO LOAD TRANSFER CONCRETE SLAB

CONSTRUCTION NOTES

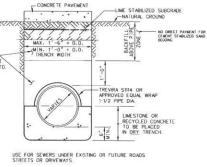
- 1. CONTRACTOR SHALL CONTACT MISSOURI CITY DEPARTMENT OF PUBLIC WORKS INMEDIATELY IF WET SAND CONDITIONS ARE ENCOUNTERED.
- LIMESTONE AND RECYCLED CONCRETE DIMENSIONS SHOWN ARE TYPICAL BUT MAY BE VARIED BY ORDER OF CITY ENGINEER.
- 3. LIMESTONE OR RECYCLED CONCRETE SHALL BE IN ACCORDANCE WITH TXDOT SPECIFICATION NO. 248 FLEXIBLE BASE, TYPE A, GRADE 2 ACGRECATE.
- 4. NO BEDDING SHALL BE INSTALLED IN WET CONDITIONS. WHEN WELL POINTING OR IN WE! SAND CONDITIONS. MAINTAIN GROUND MATER 1: FFT1 BELOW BOTTOM OF TRENCH FOR A MINIMUM OF 24-HRS AFTER BEDDING AND BACKFILL IS IN PLACE.
- ALL MATERIALS SHALL BE FROM THE APPROVED PRODUCTS LIST UNLESS SPECIFICALLY APPROVED BY THE CITY ENGINEER.
- SANITARY SEWER BEDDING FOR WET SAND CONDITIONS SHALL BE AS PER MODIFIED "A" OR "A-A".
- 7. ALL SAND BEDDING FOR WATER LINES SHALL BE CLEAN. MECHANICALLY COMPACTED BANK SAND.
- REFER TO: MANHOLE DETAILS. SANITARY. C.S.S., GENERAL, WATER CROSSING, WATER DISTRIBUTION DETAILS AND NOTES.

SANITARY FORCE MAIN & WATER LINE BEDDING AND BACKFILL





SANITARY SEWER BEDDING AND BACKFILL



N.T.S.

DEPARTMENT OF PUBLIC WORKS ROBERT UPTON. P.E.

CLLINEEL

CONSTRUCTION PLANS FOR:

WATER LINE. SANITARY SEWER. FORCE MAIN BEDDING DETAILS

missouri CITY

TEXAS

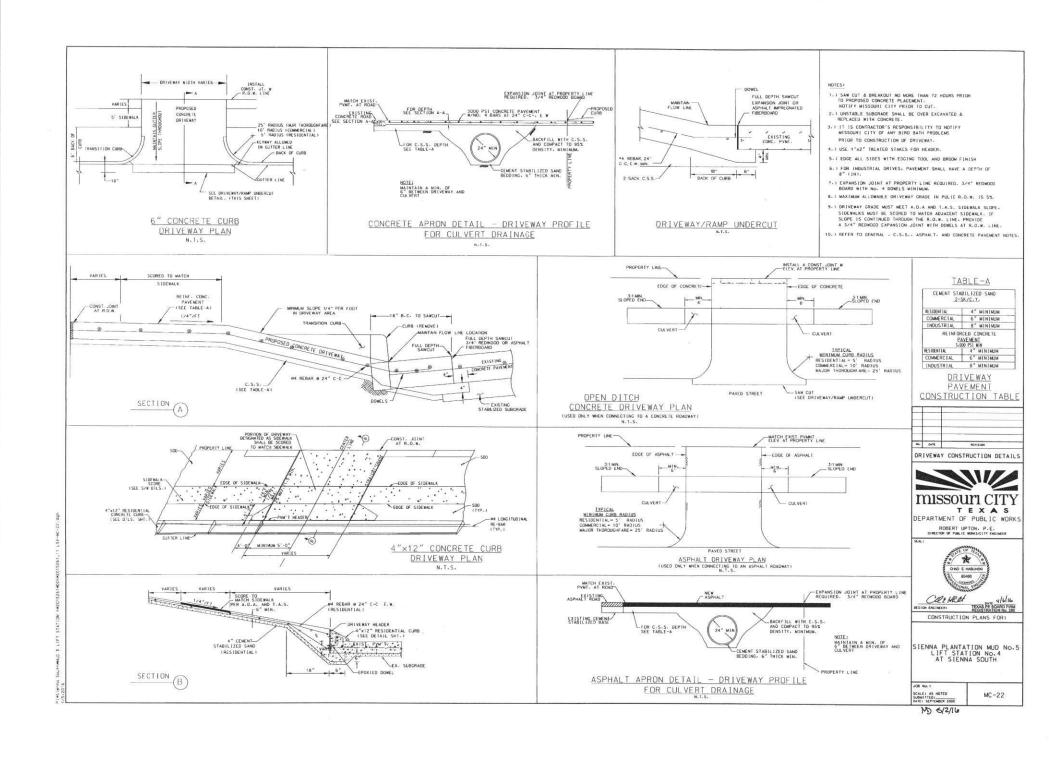
SIENNA PLANTATION MUD NO.5 LIFT STATION NO.4 AT SIENNA SOUTH

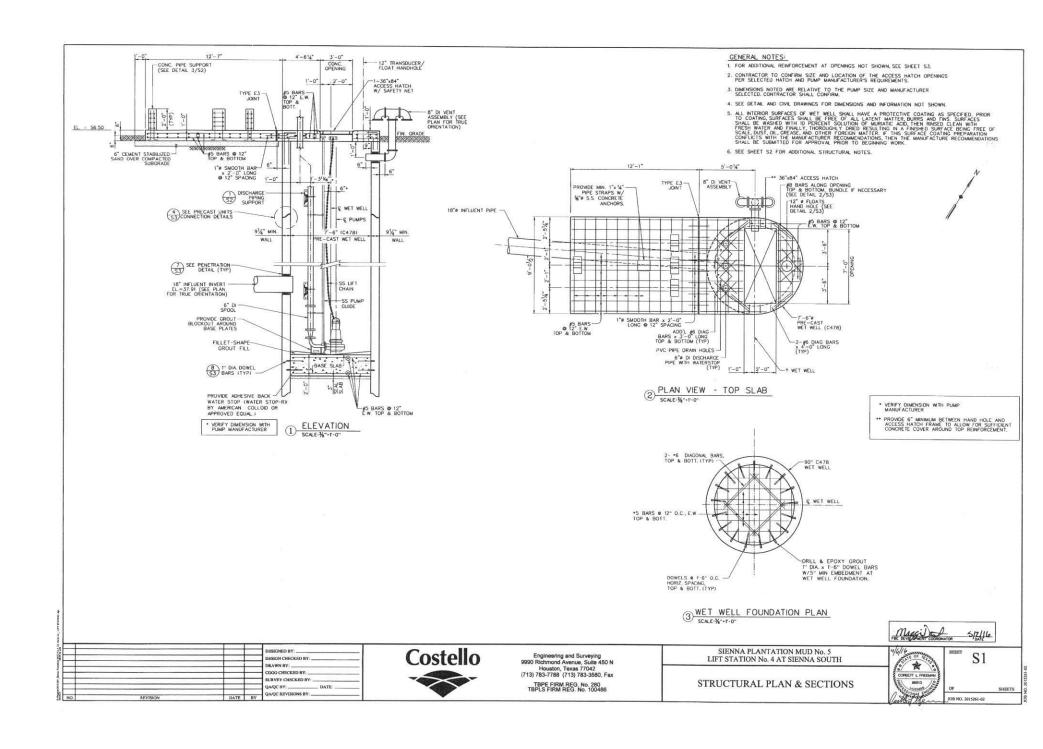
MC-15

REFER TO:

I. GENERAL NOTES
2. C.S.S.NOTES

J08 No. : SCALE: AS NOTED SUBMITTED: DATE: SEPTEMBER 2009





STRUCTURAL NOTES FOR LIFT STATION

FOUNDATION NOTES:

- ALL EXCAVATIONS SHALL BE CONDUCTED IN A DRY ENVIRONMENT FREE OF STANDING WATER, AND PROVISIONS MADE TO PREVENT THE BOTTOM OF ALL EXCAVATIONS FROM FREEZING OR
- SOIL PREPARATION AT THE BOTTOM OF THE WET WELL SHALL BE AS FOLLOWS: (1) AFTER SOIL PREPARATION AT THE BOTTOM OF THE NET WEST WEST SHALE BASED AS TOLLOWS. YOU THEN EX-SECONATION, THE SUBGRADE SHALL BE COMPACTED TO PROVIDE A UNIFORMLY STABLE AND COMPACTED BOTTOM, (2) UP TO 1-0" OF SOILS MAY REQUIRE REPLACEMENT WITH FLOWABLE FILL, AND (3) A MANIAM OF 4-INCH LEAN CONCRETE MUD SLAB SHALL THEN BE PLACED IMMEDIATELY TO PREVENT THE DISTURBANCE OF THE SUPPORTING SOIL CAUSED BY CONSTRUCTION.
- CROUNDWATER CONTROL MAY BE REQUIRED FOR INSTALLATION OF THE LIFT STATION. CROUNDWATER CONTROL MAY BE REQUIRED FOR INSTALLATION OF THE LEFT STATION. CONTRACTOR SHALL PROVIDE POSITIVE METHODS OF CROUNDWATER MANAGEMENT PRIOR TO STARTING EXCAVATION OPERATIONS. F. REQUIRED, GROUNDWATER SHALL BE LOWERED AT LEAST 3 FEET BELOW THE BOTTOM OF THE EXCAVATION OP PROVIDE A FRIM WORKING SURFACE. F. REQUIRED, DEWATERING SHALL CONTINUE UNTIL THE UTILITY INSTALLATION HAS BEEN COMPLETED AND THAT THE DEWATERING SYSTEM BE TUNNED OF THE STAGES TO ALLOW GROUNDWATER TO RECOVER TO THIS ORIGINAL LEVEL GRADUALLY, OVER A PERIOD OF ABOUL 3 TO 35 DATS.
- BENEATH THE PIPE SLAB FOUNDATION, CEMENT STABILIZED SAND, HAVING A MINIMUM UNCONFRED COMPRESSIVE STRENGTH OF 100 PS IN 46-HOURS, SHALL BE USED TO A MINIMUM DIPTH OF 6 NONES, ALSO, USE CEMENT STABLIZED SAND BACKFILL BENEATHAND OUTSIDE THE INFLUENT LIBES FROM LIMITS OF LET STATION EXCANATION, ANY OVER EXCANATION BEYOND THE 6-NICH DEPICH FOR FOUNDATION SHALL BE BACKFILLED WITH CEMENT STABLIZED SAND.
- F OPEN CUT IS USED, SELECT FILL BEHIND WALLS SHALL CONSIST OF A SANDY CLAY SOL WITH A PLASTICITY DIOCX SET IWEN 7 AND 20, AND COMPACTED IN 8-NCH LETS TO 95X ASTAL DOBS WITHIN -22 TO -22 OF OPTHALM MOSTURE. BACKFILL PLACED WITHIN 5 FEET OF THE WALLS SHALL BE HAND COMPACTED.
- IF CAISSON CONSTRUCTION IS USED GROUTING OF VOID SPACE BETWEEN CAISSON STRUCTURE AND GROUND EXCAVATION SHALL BE PER SPECIFICATION SECTION ENTITLED, "GROUTING FOR CAISSON CONSTRUCTION."
- THE AREA AROUND THE ENTIRE STRUCTURE SHALL BE WELL GRADED TO DRAIN AWAY FROM THE STRUCTURE WITHOUT DRAINING TO ADJACENT PROPERTIES.

CONCRETE NOTES:

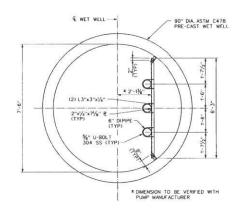
- ALL RENFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, ARRANGEMENT AND DETALS OF RENFORCING STEEL, INCLUDING BAR SUPPORTS AND SPACENS, SHALL BE IN ACCORDANCE WITH THE LATEST ACI DETAILING MANUAL, UNLESS OTHERWISE NOTED.
- ALL SLAB AND BEAM RENFORCEMENT SHALL HAVE A MINIMUM EXTENSION INTO THE SUPPORT IN ACCORDANCE WITH THE LATEST ACI CODE, IF SUCH EXTENSION IS NOT POSSIBLE, BARS SHALL TERMANET IN STANDARD HOOKS.
- 3. HORIZONTAL WALL REINFORCEMENT AND TEMPERATURE REINFORCEMENT SHALL LAP A MINIMUM OF 1.7Ld AT SPLICES. WALL DOWELS AND WALL BAR EXTENSIONS AND ALL STRESS SPLICES SHALL LAP A MINIMUM OF 1.7 Ld, UNLESS OTHERWISE NOTED.
- 4. UNLESS OTHERWISE NOTED ON THE CONSTRUCTION PLANS, ALL CAST-IN-PLACE STRUCTURAL CONCRETE SHALL BE CLASS A CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 4.000 PSI@ 28 DAYS.
- UNLESS OTHERWISE SHOWN, CONCRETE COVER FOR REINFORCEMENT PER SPECIFICATIONS SECTION ENTITLED, "CONCRETE REINFORCEMENT".
- 6. HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS SHOWN OR NOTED ON THE PLANS ARE RECOMMENDED. ANY DEVIATION FROM THOSE SHOWN SHALL HAVE APPROVAL OF THE ENGINEER
- ALL EXPOSED EDGES OF BEAMS, COLUMNS, SLABS AND WALLS SHALL BE CHAMFERED 1/4" UNLESS MASONRY OR OTHER MEMBERS ARE ERECTED FLUSH WITH THEM.
- REFER TO PROCESS, MECHANICAL AND ELECTRICAL DRAWINGS FOR ALL SLEEVES, PIPES, B. CONDUITS AND MISCELLANEOUS ANCHORING DEVICES TO BE INCORPORATED IN THE CONSTRUCTION

STRUCTURAL STEEL NOTES:

- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST ASC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS". ALL STRUCTURAL STEEL SHALL BE ASTM A36, ALL STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED, UNLESS OTHERWISE NOTED.
- ALL BOLTED CONNECTIONS SHALL BE MADE WITH 3/4-INCH DIAMETER ASTM A-325 S.S. BOLTS EXCEPT AS OTHERWISE SHOWN OR NOTED.
- 3. FIELD CONNECTIONS SHALL BE BOLTED, EXCEPT AS OTHERWISE SHOWN OR NOTED.
- 4. ALL WELDING SHALL CONFORM TO THE LATEST SPECIFICATION OF THE AMERICAN WELDING SOCETY, ALL WELDED CONNECTIONS SHALL BE MADE WITH AWS AS.1 OR AS.5 270 IS ELECTRODE.
- 5. ALL ANCHOR BOLTS & MISC. EMBEDDED STEEL SHALL BE STAINLESS STEEL SS316.

MISCELLANEOUS NOTES:

- 1. EPOXY GROUT SHALL BE POR-ROK EPOXY GROUT, OR APPROVED EQUAL.
- 2. PROVIDE CONTINUOUS WATER STOPS IN ALL CONSTRUCTION JOINTS.
- 3. CONTRACTOR SHALL LOCATE PIPE OPENINGS THROUGH STRUCTURE ACCOUNTING FOR PIPE SIZE, FLANGES AND BENDS.
- ALL DIMENSIONS AND LOCATIONS SHALL BE VERIFIED FROM CERTIFIED VENDOR DRAWINGS, PRIOR TO CONSTRUCTION.
- DOWEL BARS WILL REQUIRE DOWEL SPLICERS OR, AFTER CASTING, DRILL & EPOXY GROUT W/ 8" MIN. EMBEDMENT.



PLAN DISCHARGE PIPING SUPPORT

71/2"

END PLATE DETAIL

SCALE :1/2"-1'-0"

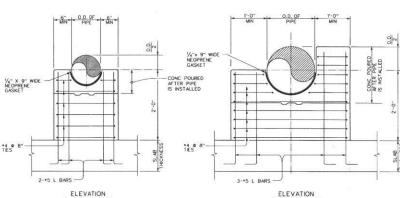
PIPE SUPPORT NOTES:

- CONCRETE ANCHOR BOLTS SHALL HAVE 6" MINIMUM EMBEDMENT AND SHALL BE TYPE 316 STAINLESS STEEL, PER SPECIFICATIONS.
- SEE SHEET ST FOR DIMENSIONS AND INFORMATION NOT SHOWN.
- 3. SET 1/4" NEOPRENE GASKET ON WALL SURFACE IN SIKA 1A (OR EQUAL) SEALANT.

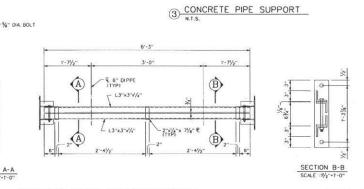


PLAN





ELEVATION



② DISCHARGE PIPING SUPPORT ELEVATION N.T.S.





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SECTION A-A

SCALE :1/2"-1-0"

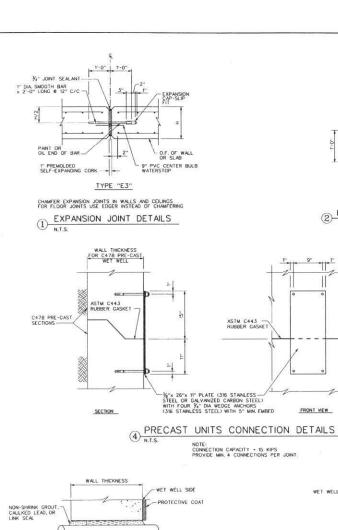
LIFT STATION No. 4 AT SIENNA SOUTH STRUCTURAL NOTES AND DISCHARGE PIPING DETAILS

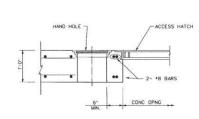
SIENNA PLANTATION MUD No. 5



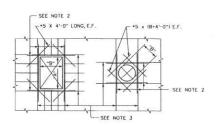
S2

SHEETS





2 HAND HOLE/HATCH FRAME SECTION N.T.S.

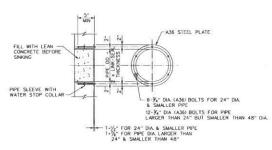


ADDITIONAL REINFORCING STEEL AT OPENINGS IN WALLS AND SLABS

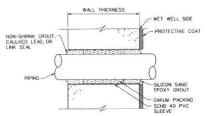
N.T.S.

NOTES:

- DETAILS SHOWN ON THIS DRAWING ARE TYPICAL DETAILS AND SHALL BE USED WHOLLY OR IN PART WHERE THEY APPLY EXCEPT WHERE MODIFIED BY DETAILED DRAWINGS & SPECIFICATIONS.
- 2. PROVIDE 2-*6 X (B+4'-0") ADDITIONAL REBARS & TOP AND BOTTOM AND 2-*6 X (A+4'-0") ADDITIONAL REBARS AT EACH SIDE OF OPENING IN WALLS ONLY.
- 3. PROVIDE ADDL BARS EQUAL TO ONE-HALF OF BARS INTERRUPTED AT EACH SIDE OF OPENING AT 3" C/C. THESE BARS SHALL BE ORIGINAL SIZES AND LENDED AS THOSE OF THE INTERRUPTED BARS. (TYPICAL FOR OPENINGS IN SLABS AND PRESSURE WALLS.)



TYPICAL PIPE BLOCK-OUT DETAIL FOR WET WELL WALL PENETRATION



SLEEVED WET WELL PENETRATION FOR PIPING 4" DIA. & SMALLER 6) N.T.S.

DESIGNED BY-

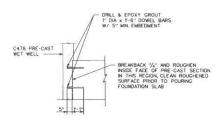
DESIGN CHECKED BY:

COGO CHECKED BY: SURVEY CHECKED BY: ..

OA/OC REVISIONS BY: _

THICKNESS - CONTRACTOR TO CORE HOLE IN WET WELL AND PROVIDE COUPON FOR INSPECTION PASSING PIPE PROTECTIVE COAT --MODULAR MECHANICAL SEAL ASSEMBLY W/STAINLESS STEEL BOLTS & NUTS, THUNDERLINE LINK SEAL, OR APPROVED EQUAL

PENETRATION SEAL DETAIL FOR PIPING 6" DIA. & LARGER 7 N.T.S.



DOWEL BAR CONNECTION @ C478 WET WELL. DETAIL

MUSSING DE VOICEMATOR SIENNA PLANTATION MUD No. 5 LIFT STATION No. 4 AT SIENNA SOUTH

Costello
-

FRONT VIEW

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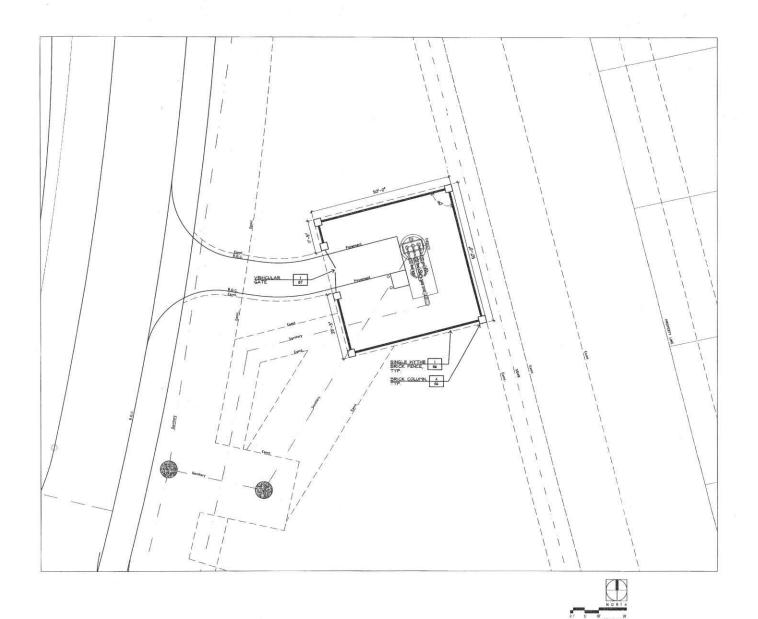
STRUCTURAL DETAILS



S3

5/2/16

JOB NO. 2015261-02







José Pest Des Blod. Suite 1100
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(713) 439-0027 Fax: (713) 439-0027
Austin - Daffas - Fort Lauderdale Fort Worth - Houston - San Antonio - Tulsa

Project:

Sienna Plantation M.U.D. 5 Lift Station No. 4

Sienna South

Missouri City, Texas

Project Number:

Reviewed: MK/MM Date Issued: March 22, 2016

Sheet Title: FENCE PLAN

Sheet Number: 4

ND 5/2/16

- ALL CONCRETE CONSTRUCTION, DETAILING AND ERECTION SHALL CONFORM TO THE FOLLOWING
 - A.) ACI #301: SPECIFICATIONS B.) ACI 4316: BUILDING CODE REQUIREMENTS
 - C.) ACI #315: MANUAL OF STANDARD PRACTICE
- 2.) CONCRETE MATERIALS SHALL CONFORM TO THE FOLLOWING ASTM REQUIREMENTS*
 - CRETE MATERIALS SHALL CONFORM TO A.) AGGREGATE C33 B.) READY MIXED CONCRETE C94 C.) PORTLAND CEMENT C80 D.) FIELD CYLINDERS C31

 - E.) COMPRESSIVE TESTING C39
- 3.) ALL CONCRETE SHALL BE NORMAL HEIGHT CONCRETE HEIGHING NOT MORE THAN 146 PCF AND SHALL HAVE A MINIMUM CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS OF 3000 PSI.
- 4.) THE WATER/CEMENT RATIO FOR STRUCTURAL CONCRETE SHALL NOT EXCEED 0.53.
- 6.) TOTAL AIR CONTENT SHALL BE 3 TO 5 PERCENT.
- 6.) CONCRETE TEST CYLINDERS SHALL BE OBTAINED FOR EVERY SO CUBIC YAMDS OF CONCRETE FLACED, OR NAY PORTION THEREOF PERSONNED IN A SHALL BE TALDED FROM PERSON SHEET AND THE STATE OF THE SHALL BE REPROPERLY SHALL BE TRECKED FROM SHEET AND THE SHALL BE TRECKED TO GO ONE CILINDER AT 7 DAYS AND THE CILINDER AT 30 DAYS. THE FORETH CYLINDER SHALL BE RETAINED FOR SE DAYS AND TESTED OALY IF THE AVERAGE STRENGTH OF THE 28 DAY TEST RESULTS DO NOT HERE THE PINNING COPPRESSIVE STRENGTH SHEET THE PINNING COPPRESSIVE STRENGTH SHEET FINNING COPPRESSIVE STRENGTH SHEETERS.
 - B.) CONDUCT A SLUMP TEST FOR EACH SPECIMEN.
- 7.) PUMPED CONCRETE SHALL MEET THESE ADDITIONAL REQUIREMENTS:
 - A.) MAXIMUM COARSE AGGREGATE SIZE 1 INCH B.) INCREASE CEMENT FACTOR BY 1/2 SACK PER CUBIC YARD.

 - C.) MAXIMUM SLUMP 5 INCHES
 - D.) DO NOT PUMP THROUGH AN ALUMINUM TUBE.
- 8.) CONCRETE SHALL NOT BE PLACED PRIOR TO APPROVAL OF THE CONCRETE HIX DESIGNS BY THE LANDSCAPE ARCHITECT. THE MIX DESIGNS SHALL NOT BE APPROVED PRIOR TO RECEIPT OF COMPRESSION TEST REQULIFS FROM AN INDEPENDENT TESTING LABORATORY CERTIFING ADBIGATE STREAMTH OF THE
- E) HORIZONTAL CONSTRUCTION JOINTS ARE CRUT ALLONED IN SLABS OF BEAMS WITH HRITTEN MPPROVAL OF THE LANGSCAPE ARGUSTED", CONTROL JOINTS SHALL BE PLACED HAMMUNI 25' D.C. AS REQUIRED WITH THE APPROVAL OF THE LANGSCAPE ARGUSTED.

CONCRETE CONSTRUCTION NOTES:

I.) CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL MASONRY CONSTRUCTION, CONCRETE FOOTINGS, BEAMS AND STRUCTURAL SUPPORTS, ETC., PRIOR TO STARTING WORK, ALL DETAILS SHOWN ARE FOR DESIGN AND STRUCTURE OF RESPONSIBLE FOR OVERALL STRUCTURE, BLEDGE SECOND AND STRUCTURE OF RESPONSIBLE FOR OVERALL STRUCTURE, INTEGRITY OF COMPONENTS, AND SHALL MAKE REVISIONS TO DESIGNS HE DESIGN SECSSARY FOR THE MARKANTY PROVISIONS.

REVISIONS SHALL BE SUBSTITED TO THE LANDSCAPE ARCHITECT AND THE GAMER FOR APPROVAL.

THE CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING AND PATCHING WORK AS REQUIRED TO INSTALL THE

- 2.) THE CONTRACTOR SHALL NOT FABRICATE OR INSTALL MEMBERS AS SHOWN ON THE DRAWINGS IF 2.) THE CONTROLING SHALL NOT PARROCATE OR INSTALL THERBORN AS SHOWN ON THE DRIVINGS IN-THERE ARE DISCREPANCIES OR CONFLICTS BETTWEEN THE DISCRING CONTINUES AND THE INFORMATION SHOWN ON THE DRIVINGS WITH THE DISCREPANCIES HAVE BEEN RESOLVED. PRIOR TO FARROCATION OR INSTALLATION, THE CONTRACTOR SHALL PREPARED CALL SHOULD REPORTED HAVE OR CONFLICTS TO THE ATTENTION OF THE LANDSCAPE ARCHITECT INTERDATELY AND BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT, OWNER AND OWNER'S GEOTECHNICAL TING LAB 24 HOURS PRIOR TO POURING CONCRETE.
- 4.) HEAVY CONSTRUCTION EQUIPMENT SHALL NOT OPERATE WITHIN 3' OF ANY STRUCTURES.
- 5.) THE OWNER RESERVES THE RIGHT TO SECURE THE SERVICES OF A COMMERCIAL TESTING LABORATORY TO PERFORM ALL REQUIRED INTERIALS TESTS AND INSPECTIONS. CONTRACTOR SHALL COOPERATE AND COORDINATE FULLY HITH THE TESTING LABORATORY.
- - A.) UNFORM BUILDING CODE (UBC.). INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS, HOST RECENT EDITION.

 B.) ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE ACE 318.83

 - C.) RECOMMENDED BUILDING CODE REQUIREMENTS FOR ENGINEERED BRICK MASONRY. BRICK INSTITUTE OF AMERICA (BIA), MOST RECENT EDITION.
- 7.) ALL POWED CONCRETE OF CONCRETE MASONRY UNIT DIRECTLY CONTACTING SOIL SHALL BE COATED HITH AN ASPHULTIC MATER PROOF PRIMERANE SEALER, "GULF STATES" OR EQUAL. PRIME HITH GULF STATES 1927 THINITUM IS THES. THOME. APPLY VIS" LAYER OF GULF STATES 1920 ASPHALTIC PROPRIAME SEALER.
- 6.) UPON COMPLETION OF CONSTRUCTION AND PRIOR TO FINAL APPROVAL, CONTRACTOR SHALL THOROUGHY CLEAN UP THE PROJECT SITE OF ALL TRASH, SCRAP, BRICK PRICES, MORTAR AND LITTER, ETC. REPAIR ALL DATAGE OF MINIST GAZDE INCLUDING TALLINGS PROFI ESCANTIONS, NI-BER RUTS, ETC.,
- 4.) ALL WORK SHALL BE GUARANTEED BY THE CONTRACTOR AGAINST MATERIAL DEFECTS AND WORKMANSHIP FOR A PERIOD OF TWO (2) YEARS

CONCRETE REINFORCMENT:

- ALL REINFORCEMENT SHALL BE DEFORMED BILLET STEEL (GR.60) CONFORMING TO ASTH A616.

 A.) REINFORCING A616, GRADE 60, DEFORMED

 B.) HELDED WIRE HERE A186, GRADE 60
- 2.) SPLICES OF HORIZONTAL REINFORCEMENT SHALL LAP AT LEAST 24" AND SHALL BE CONTINUOUS AROUND CORNERS. MAINTAIN AT LEAST IN BETWEEN REINFORCING BARS AT SPLICES IN BEAMS AND SLABS. REINFORCING BARS SCHEDULED AS CONTINOUS SHALL BE LAPPED 24°.
- 8.) DETAILING FABRICATION AND ERECTION OF REINFORCING BARS SHALL COMPLY HIH THE ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
- 4.) STANDARD PROTECTIVE COVER FOR REINFORCING, UNLESS NOTED OTHERWISE, SHALL BE AS
- OUTLINED IN ACI 316-83-
 - IN ACI 316-83.

 A) AGAINST DIRT OF FILL 8 INCHES
 B.) EXPOSED TO EARTH OR NEATHER 2 INCHES
 C.) SLABS AND WALLS I INCH
 D.) OTHER 1 I/2 INCHES
- 5.) PROVIDE SHOP DRAWINGS OF REMFORCING AND ACCESSORIES FOR REVIEW BY ARCHITECT. SHOP DRAWINGS SHALL CLEARLY MORATE LOCATION, SIEE, SPACING, SPLEES AND PIECEMARK FOR ALL REMPORCING STEEL. THE SHOP DRAWINGS SHALL PROVIDE SHIPFICIDED TEATUR. TO PREMIT PLACEMENT OF REINFORCINES THE THE USE OF THE DESIGN DRAWINGS AND SHALL INCLUDE A COMPLETE BILL OF
- 6.) FABRICATION OF REINFORCING STEEL SHALL NOT COMMENCE UNTIL SUBMITTALS HAVE BEEN REVIEWED BY LANDSCAPE ARCHITECT

BRICK MASONRY:

- 1.) BRICK MASONRY UNIT CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ASTM STANDARD SPECIFICATIONS FOR BRICK, MORTAR AND APPLICABLE TESTING METHODS UNITS, AND SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE BRICK INSTITUTE OF AMERICA (BIA).
- 2.) CONTRACTOR TO ALLOW FOR CONSTRUCTION OF THREE (3) MOCKUP PANELS 3' WIDE BY 5' HEIGHT FOR OWNER APPROVAL OF FINAL BRICK SPECIFICATION.
- 3.) MORTAR SHALL CONFORM TO ASTM C 270, TYPE S (I PART PORTLAND CEMENT, I/2 PART HYDRATED LIME, AND 3 PARTS SAND, BY VOLUME). MASONRY CEMENT SHALL NOT BE ALLOWED.
- 4.) THE MINIMUM COMPRESSIVE STRENGTH OF THE MASONRY PRISM SHALL BE 2000 PSI
- 5.) HEAD AND BED JOINTS IN BRICK MASONRY HALLS AND COLUMNS SHALL BE FILLED SOLID.
- 6.) MORTAR JOINTS SHALL BE CONCAVE TOOLED NOT RAKED
- 7.) BRICK SHALL BE PRESSURED WASHED WITH CLEAN WATER UPON COMPLETION.
- 8.) TIE ALL FACE BRICK TO WALLS, MAXIMUM 32" O.C., VERTICALLY AND HORIZONTALLY

GENERAL SITEWORK NOTES:

- I.) CONTRACTOR SHALL BE FAMILIAR MITH EXISTING SITE CONDITIONS AND UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY OF ANY COST INCURRED DUE TO BOOILY NUMBEY AND/OR DAMAGE OF GHERE'S PROPERTY OR SAID UTILITIES. CONTRACTOR IS
- ANY COMPLICTING INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OR THE LANDSCAPE ARCHITECT AND OWNER SHALL ASSUME THE CONTRACTOR HAS INCOMPRIATED THE COSTILERS (1991).
- 8.) DO NOT HILLFULLY PROCEED HITH CONSTRUCTION AS DESIGNED HABBLUNGHAN DESTRUCTIONS AND FOR GRADE DEFERENCES DOES THAT HAY HAVE NOT BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE REPORTED'S BEGUSH'T OTHE ATTENTION OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL ASSUME PULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH.
- 4.) CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION HITH HIS SUBCONTRACTORS TO ACCOPPLISH HIS SCOPE OF MORK. CONTRACTOR SHALL COORDINATE CONSTRUCTION WITH OTHER TRADES HOROIGIG OT HIS SITE SHIFLIANDEOUSLY.
- 6.) CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING IRRIGATION AND LANDSCAPE ON SITE FROM ANY DAPAGE. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY CONFLICTS
- CONTRACTOR SHALL NOTIFY OWNER AND LANDSCAPE ARCHITECT 46 HOURS PRIOR TO COMMENCEMENT 6.) CONTRACTOR SHALL NOTIFY OWNER AND LANDSCAPE OF WORK TO COORDINATE PROJECT INSPECTION SCHEDULES.
- 7.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF EXISTING CONDITIONS, AND SHALL PERFORM FIELD PEASUREMENTS PROR TO PASPICATION AND/OR PURCHASE OF ANY TRATERIAL AND SHALL CONTRACT THE LANDSCRIPT ARCHITECT SHOULD EXISTING CONDITIONS BE DIFFERENT FROM THE DESIGN DRAWINGS FOR THIS PROJECT. CONFLICTS ARISING DUE TO LACK OF COORDINATION SHALL BE THE RESPONSIBILITY AND THE EXPENSE OF THE CONTRACTOR.
- 8.) ANY REQUIRED CHANGES TO THE DRAWINGS RESULTING FROM THE ACCEPTANCE OF CONTRACTOR'S ALTERNATES AND/OR SUBSTITUTIONS AND THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT AND THE OWNER FOR APPROVAL
- 9.) THE CONTRACTOR SHALL COORDINATE STORING OF MATERIALS, PARKING OF VEHICLES AND RESTRICTIONS OF MORK NITH THE OWNER. UNDER NO CIRCUMSTANCES SHALL ANY CONTRACTOR STORE MATERIALS OR PARK VEHICLES UNDER THE CAMPRY OF EXISTING TREES.
- 10.) CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE ORDINANCES AND LOCAL CODES. REQUIRED PERMITS SHALL BE OBTAINED BY THE CONTRACTOR.
- II.) CONTRACTOR SHALL PROVIDE UNIT PRICES BASED ON QUANTITIES ON DOCUMENTS. FIELD CONDITIONS THAY EXINSE ACTUAL LOCATION, INCREASING OR DECREASING THE EXTENT OF MORK BID. CHANGES TO THE DETENT OF HORK RESULTING IN AN INCREASE HILL BE BASED ON UNIT PRICES AND PERFORMED SUBJECT TO APPROVAL OF THE LANDSCAPE ARCHITECT AND THE OWNER IN THE FORM OF A CHANGE ORDER.
- 2.) ALL CONSTRUCTION COVERED BY THESE CONTRACT DOCUMENTS SHALL BE IN CONFORMANCE WITH THE LATEST EDITION OF ALL APPLICABLE CITY AND OSHA CODES AND STANDARDS INCLUDING, BUT NOT LINTED TO, THE UNIFICIAL BUT AND CODE, SHACTED BY THE INTERNATIONAL COMPENSIVE OF BUILDING OFFICIALS, MOST RECENT EDITIONS, AND AMENOMENTS AS ADDITED BY THE LOCAL GOVERNMENT.
- 18.) THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND SUPERVISION NECESSARY TO ACCOMPLISH THE WORK AS SHOWN AND NOTED ON THE DRAWINGS UNLESS OTHERWISE SPECIFIED.
- 14.) CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND SERVICING TEMPORARY TOILET FACILITIES.
- 15.) CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR REMOVAL OF TRASH AND REPAIR OF HAZARDOUS CONDITIONS (TOOL, OPEN HOLES, ETC.) ON A DAILY BASIS BY END OF HORK DAY. REMOVE ALL EXCESSIVE DIRT BUILD UP ON HAUL ROUTE AS REQUIRED DAILY AND BY NOON EVERY FRIDAY.
- 16.) MEEKEND WORK PERMISSIBLE WITH DRY MEATHER CONDITIONS AND WITH PROVISIONS FOR STREET CLEANING AT THE END OF THE WORK DAY.
- IT.) UPON COPPLETION OF CONSTRUCTION AND PRIOR TO FINAL APPROVAL, CONTRACTOR SHALL THOROUGHLY CLEAN UP THE PROJECT SITE OF ALL TRASH, SCRAP, BRICK PIECES, HORTAR AND LITTER, ETC. REPAIR ALL DAYINGE TO FINISH GRADE INCLUDING TAILINGS PROM EXCAVATIONS, NHEEL RUTS, ETC., CAUSED BY CONSTRUCTION.

CONCRETE MASONRY UNITS:

- 1.) ALL HORK SHALL CONFORM TO THE MOST RECENT EDITION OF THE UNIFORM BUILDING CODE AND THE NATIONAL CONCRETE MASONRY ASSOCIATION.
- 2.) HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS (CMU) SHALL BE LIGHTWEIGHT, GRADE N AND CONFORM TO ASTM C40, MASONRY UNITS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI WHEN TESTED IN ACCORDANCE WITH ASTM C-140 "METHODS OF SAMPLING AND TESTING CONCRETE MASONRY UNITS." (F'M = 1350 PSI)
- B.) MORTAR FOR MASONRY SHALL BE IN ACCORDANCE HITH ASTM C270 TYPE "S", EXCEPT ALL MORTAR BELOW GRADE SHALL BE TYPE "M".
- 4.) GROUT FOR REINFORCED CHU SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI WITH A MAXIMUM 3/6* AGGREGATE SIZE.
- 5.) CONTROL JOINTS SHALL BE PLACED 25' O.C. AS REQUIRED WITH THE APPROVAL OF THE LANDSCAPE ARCHITECT. USE SLOTTED CHU'S AND JOINT FILLER
- ALL C.M.U. HALLS SHALL BE REINFORCED WITH A GR., MILL GALVANIZED, HORIZONTAL WIRE REINFORCEMENT (TRUSS TYPE) EMBEDDED IN MORTAR JOINTS AT 16" O.C. WIRE REINFORCEMENT SHALL CONFORM TO ASTM A-82, AND SHALL BE LAPFED AT LEAST 6" HITH AT LEAST ONE CROSS HIRE HITHIN



Landscape Architects - Planners 3050 Post Oak Blvd., Suite 1100 Houston, Texas 77056 (713) 439-0027 Fax: (713) 439-0067 Austin - Dallas - Fort Lauderdale Fort Worth-Houston-San Antonio - Tulsa

Project:

Sienna Plantation M.U.D. 5 Lift Station No. 4 Sienna South

Missouri City, Texas

Project Number:

Designed: TBG

Drawn: JZ/JS

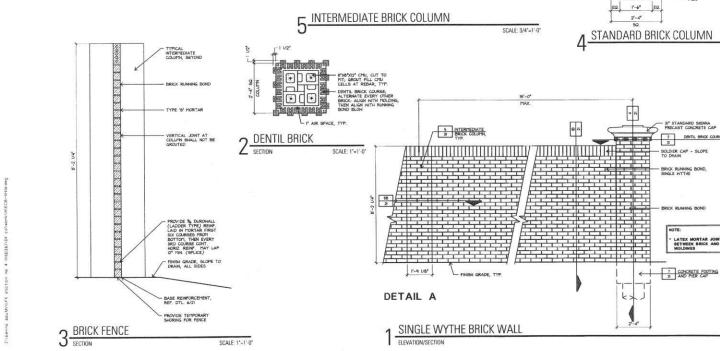
Reviewed: MK/MM

Date legior March 22, 2016

Sheet Title NOTES

Sheet Number 5

MD 5/2/16



1'-6" MIN.

DETAIL A

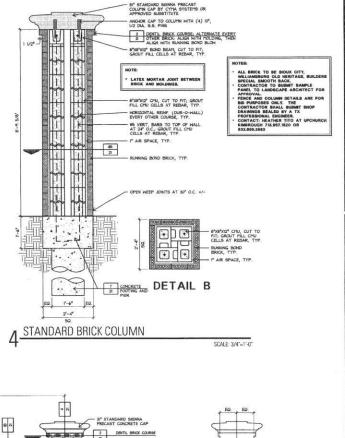
3-#5 EQUAL SPACED EACH WAY

SINGLE WYTHE BRICK FENCE, REF. I/X

- I'XIB' X I', % GALY. HIRE 'Z', A5 MANUF. BY BLOCK LOK, SPACE 20' O.C. EVERY OTHER HEAD JOINT AS SHOWN, CENTER IN BED JOINT, TYP.

7 STANDARD COLUMN PIER CAP & PIER

6 BRICK WALL BASE REINFORCEMENT SCALE



P.S.I. CONCRETE; REBAR

DETAIL B

T B G



Project: Sienna Plantation M.U.D. 5 Lift Station No. 4

Sienna South

Missouri City, Texas

Project Number:

Designed: TBG
Drawn: JZ/JS

Reviewed: MK/MM

Date Issued: March 22, 2016

Revisions:

IA COLUMN BEYOND

- FINISHED GRADE, TYP.

FOUNDATION PER SHOP DRAWINGS

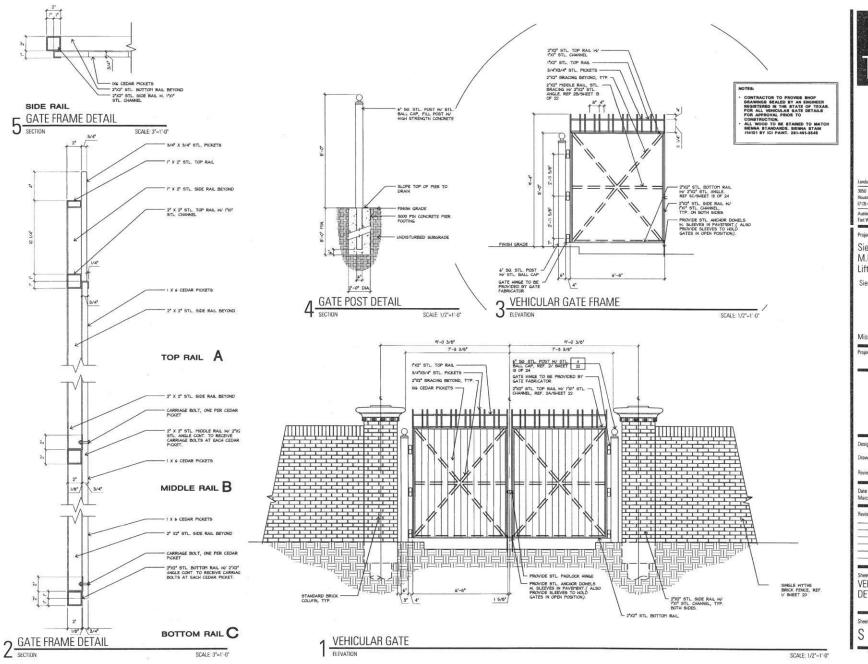
SCALE: 1/2*=1'-0*

DETAIL B

Sheet Title: FENCE DETAILS

Sheet Number:

ND 5/2/16







3050 Post Oak Blvd. (713) 439-0027 Fax: (713) 439-0067 Austin - Dallas - Fort Lauderdale Fort Worth-Houston-San Antonio - Tulsa

Project:

Sienna Plantation M.U.D. 5 Lift Station No. 4

Sienna South

Missouri City, Texas

Project Number:

Designed: TBG JZ/JS

Reviewed: MK/MM

Date Issued: March 22, 2016

VEHICULAR GATE DETAILS

Sheet Number:

ND 5/2/14

ONE-LINE DIAGRAM LEGEND DESCRIPTION

REDUCED VOLTAGE AUTO TRANSFORMER STARTER

CONTACT POINT GROUND FAULT INTERRUPTER CIRCUIT BREAKER STARTER CONTACT GROUND

	DESCRIPTION							
SYMBOL								
(CR)	CONTACT RELAY, 4 POLE UNIVERSAL - PLUG IN							
2	CIRCUIT BREAKER OR MCP							
(TD)	TIME DELAY RELAY							
®	INDICATING LIGHT							
M	A-AMBER; B-BLUE; G-GREEN; R-RED; Y-YELLOW; W-WHITE MAGNETIC MOTOR STARTER							
T	SSC TEST TERMINAL							
M M	HOLDING COIL CONTACT (NORMALLY OPEN - NORMALL)							
CR CR	CLOSED) CONTROL COIL CONTACT (NORMALLY OPEN - NORMALL							
	CLOSED)							
ETM	CURRENT SWITCH ELAPSE TIME METER							
EIM	FUSE							
w	HEATER							
A	LOCATED ON FACE OF MCC LOCATED ON FACE OF AUTOSENSORY							
	TERMINAL BLOCK							
SUP	SURGE SUPPRESSION DIODE							
F	FLASHER MODULE							
F-A	ALARM HORN							
00	RECEPTACLE							
OL'S OR WWW OR OL'S	OVERLOAD, NORMALLY CLOSED							
120V	PRESS-TO-TEST INDICATION LIGHT							
<u></u>	CONTROL POWER TRANSFORMER							
7 HS	2 POSITION SELECTION SWITCH							
ڎٛڎ	HAND-OFF-AUTO SWITCH							
TEST	PUSHBUTTON							
ON OFF SV	ON-OFF SWITCH							
마	SOLENOID VALVE							
F	FLOAT OPERATED SWITCH, OPENS ON RISE							
F	FLOAT OPERATED SWITCH, CLOSES ON RISE							
TD Truc	TIME DELAY RELAY CONTACT NORMALLY CLOSED, TIME DELAY CLOSING (I.O.T.D.C.)							
Tipo	TIME DELAY RELAY CONTACT NORMALLY CLOSED, TIM DELAY OPENING							
TD TD TO	TIME DELAY RELAY CONTACT NORMALLY OPEN, TIME DELAY OPENING (I.C.T.D.O.)							
TD TDC	TIME DELAY RELAY CONTACT NORMALLY OPEN, TIME DELAY CLOSING							
olo	TIME DELAY RELAY CONTACT NORMALLY OPEN, TIME DELAY CLOSING							
FS	FLOW SWITCH, OPENS ON FLOW							
£0	FLOW SWITCH, CLOSES ON FLOW							
°T°	PRESSURE SWITCH, OPENS ON RISING PRESSURE PRESSURE SWITCH CLOSES							
TEMP	ON RISING PRESSURE TEMPERATURE ACTUATED SWITCH,							
°Ę° TEMP	OPENS ON RISE TEMPERATURE ACTUATED SWITCH,							
ZS	CLOSES ON RISE							
ZS	LIMIT SWITCH, NORMALLY OPEN							
0-0	LIMIT SWITCH, NORMALLY OPEN, HELD CLOSED							
ZS	LIMIT SWITCH, NORMALLY CLOSED							
ZS	LIMIT SWITCH, NORMALLY CLOSED, HELD OPEN							

SYMBOL	DESCRIPTION					
—E—	BURIED CONDUIT					
	EXPOSED CONDUIT					
	HIDDEN CONDUIT					
	LIGHT LINEWEIGHT (EXISTING)					
	HEAVY LINEWEIGHT (PROPOSED)					
TO XXX	HOMERUN TO PANEL OR MCC AS NOTED (DASHED LINE INDICATES HIDDEN CONDUIT)					
\rightarrow	DUCTBANK/SECTION					
(ABC123)	CONDUIT TAG					
(-)	DETAIL REFERENCE					
1////	TO BE REMOVED					
	CONDUIT END CAP					
ō	GROUND ROD					
ф	SINGLE CONVENIENCE RECEPTACLE					
Q Q _{Mb}	DUPLEX CONVENIENCE RECEPTACLE (WP INDICATES CAST WEATHER PROOF OUTLET BOX AND COVER)					
Ö	QUAD RECEPTACLE					
O 208V	208 VOLT, SINGLE SPECIAL PURPOSE RECEPTACLE					
Ф	240 VOLT, SINGLE SPECIAL PURPOSE RECEPTACLE					
4 4 4	SURFACE MOUNTED RECEPTACLE					
\$ \$wp	SINGLE POLE TOGGLE SWITCH (WP INDICATES CAST WEATHER PROOF OUTLET BOX AND COVER)					
\$3 \$4	3 WAY SWITCH - 4 WAY SWITCH					
\$ M	MOTOR SWITCH					
\$	SURFACE MOUNTED SWITCH					
Ā	TELEPHONE UTILITY SYSTEM OUTLET					
DS	DOOR SWITCH					
OHD	OVERHEAD DOOR SWITCH					
0	ELECTRIC THERMOSTAT					
PC	PHOTOELECTRIC CELL					
<u> </u>	JUNCTION BOX (J-BOX)					
(SV)	SOLENOID VALVE					
8	SENSOR					
Ñ	EXIT SIGN					
C	CONDUIT TURN					
2	SURVEILLANCE CAMERA					

QA/QC BY: ____ DATE: QA/QC REVISIONS BY:__

DESIGNED BY:

DRAWN BY:___ COGO CHECKED BY:_ SURVEY CHECKED BY

REVISION

DESIGN CHECKED BY:

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SIENNA PLANTATION MUD No. 5 LIFT STATION No. 4 AT SIENNA SOUTH

SYMBOL LEGENDS



*

E-000

SHEETS JOB NO. 2015261-02

MD 5/2/16

ABBREVIATIONS LEGEND

SM SN SV SVS SP

SYSTEM MONITOR

SOLID NEUTRAL SOLENOID VALVE

SHAFT VIBRATION STOP SURGE PROTECTOR

SURGE PROTECTION DEVICE

SINGLE POLE SINGLE THROW

CONDUCTOR CROSS SECTIONAL

MOTOR CIRCUIT PROTECTOR MOLDED CASE SWITCH MAIN DISTRIBUTION PANEL

ARFA

METAL HALIDE

MINIMUM

EACH WITH

FEEDER

FCV FDR

EAHRENHED

FOOTCANDLE FLOW CONTROL VALVE

FILTER DISK UNIT

AMPERE

DESIGNED BY:

QA/QC BY: _

DESIGN CHECKED BY: _ DRAWN BY:_ COGO CHECKED BY:

SURVEY CHECKED BY

QA/QC REVISIONS BY:_

_ DATE:

AMPERE ALTERNATING CURRENT ADJUSTABLE ABOVE FINISHED FLOOR ABOVE FINISHED GRADE

AMPERE FRAME

AMPERE HOUR

GENERAL NOTES:

1. INSTALLATION SHALL BE ACCORDING TO CURRENT NEC. INCLUDING ALL APPLICABLE LOCAL ORDINANCES, WIRING AND DETAILS COMMONLY DESCRIBED IN CODE MAY NOT BE SHOWN ON PLANS, BUT ARE APPLICABLE PER CODE REQUIREMENTS

CONTRACTOR IS ADVISED TO READ ALL ELECTRICAL RELATED SPECIFICATION SECTIONS PRIOR TO BIDDING AND CONSTRUCTION. SEE SPECIFICATION 16012 FOR LIST OF PRE-QUALIFIED ELECTRICAL CONTRACTORS AND PANEL FABRICATORS.

SHRADER ENGINEERING E-001

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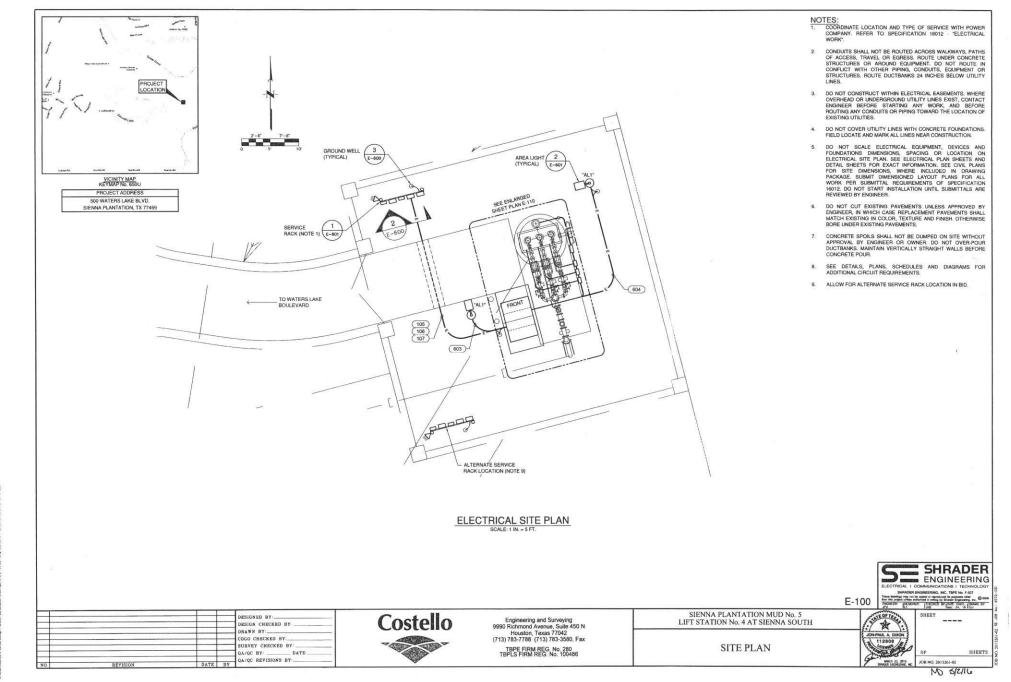
SIENNA PLANTATION MUD No. 5 LIFT STATION No. 4 AT SIENNA SOUTH

> ABBREVIATIONS AND **GENERAL NOTES**

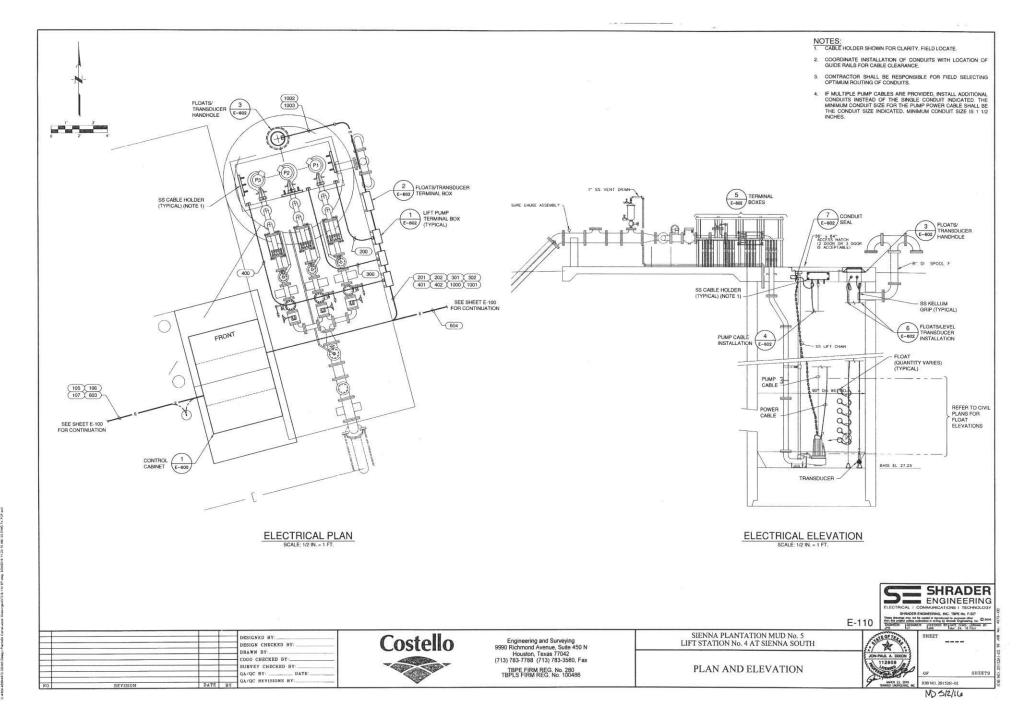
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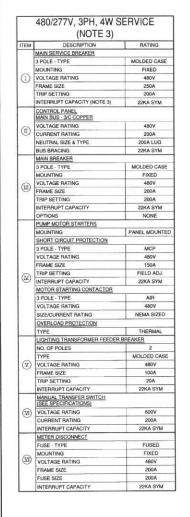
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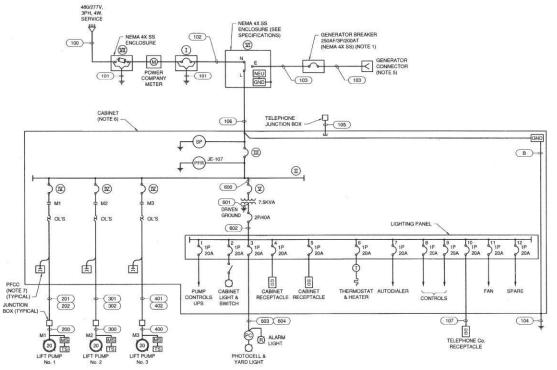
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1400 Labobar 27 (Fig.) December Described Community Dissertation Described 27 F 100 FSP dec 3034001 11 23 30 AM 33 2005 To PD







NOTES:

- 1. ADJUST SIZE TO MATCH GENERATOR CONNECTOR AMPACITY.
- VERIFY PUMP CABLE SIZE WITH PUMP MANUFACTURER AND ADJUST CONDUIT & CSBE SIZE AS REQUIRED.
- CONTRACTOR SHALL VERIFY AVAILABLE FAULT CURRENT WITH POWER COMPANY AND PROVIDE EQUIPMENT RATED ACCORDINGLY.
- IF MULTIPLE PUMP CABLES ARE PROVIDED, INSTALL
 ADDITIONAL COMDUTS INSTEAD OF THE SINGLE CONDUIT
 INDICATED. THE MINIMUM CONDUIT SIZE FOR THE PUMP FOVER
 CABLE SHALL BE THE CONDUIT SIZE INDICATED. MINIMUM
 CONDUIT SIZE IS 1 12 KNOHES.
- PROVIDE WEATHERPROOF CONNECTOR TO MATCH CONFIGURATION OF OWNERS EXISTING STANDARDS, COORDINATE WITH OWNER, ADJUST BREAKER SIZE WHERE CONNECTOR IS SMALLER THAN 200 AMPS.
- ALL CONTROL PANELS ARE TO BE UL LISTED PER SPECIFICATIONS.
- 7. VERIEY CAPACITOR SIZE REQUIREMENTS WITH MOTOR MANUFACTURER BEFORE FOREINING, DO NOT OVERCORDEROT PROVIDE CONDUCTORS AND CONDUITS SIZED ACCORDING TO NEC. CAPACITORS SHALL NOT BE DIRECTLY CONNECTED TO RVAT AND SOLID STATE STANTERS, PROVIDE CONTACTOR, HOA. TIME DELAY AND BREAKER INTERLOCK WITH STARTERS,
- CONTRACTOR SHALL READ ENTIRE CONTENTS OF SPECIFICATION SECTION 16012 ENTITLED ELECTRICALWORK AND OTHER REFERENCED SPECIFICATIONS CONTAINED THEREIN BEFORE BIDDING ON THIS PROJECT.

ONE-LINE DIAGRAM

LOAD		AMPS		
LOAD	ØA	ØB	ØC	
LIFT PUMP NO. 1	20HP	27	27	27
LIFT PUMP NO. 2	20HP	27	27	27
LIFT PUMP NO. 3	20HP	27	27	27
TRANSFORMER	7.5KVA	16	16	-
25% OF LARGEST MOTOR		6	6	6
TOTAL LOAD		103	103	87
SERVICE AMPACITY @ 480/277V, 3PH, 4W		200	200	200
SPARE AMPACITY		97	97	113

CALCULATED MAXIMUM AVAILABLE FAULT CURRENT = 15,920 AM USE 22 KAIC RATED DEVICES AND BRACING (NOTE 3)

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PARTICIPATION OF THE THE FAST OF THE FAST

				DESIGNED BY: DESIGN CHECKED BY: DRAWN BY:
			_	COGO CHECKED BY:
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ONE-LINE DIAGRAM



E-200

SHEET SHEETS

M 5/2/16

LUMINAIRE FIXTURE SCHEDULE									
MARK	FIXTURE DESCRIPTION	LAMP TYPE	WATTAGE	VOLTAGE	COMMENTS				
AL1	LITHONIA # CSX1 LED 60C 700 40K T4M MVOLT SPA	LED	134	120	DARK BRONZE FINISH, SINGLE FUSE, WITH VANDAL GUARD (DARK-SKY COMPLIANT)				

		3	PHAS	E FE	EEDE	RCC	DONO	СТС	R A	ND	DΕ\	/IC	E TA	ABLE
	CURRENT RATING	0	ONDUIT		PHASE IDUCTOR		UTRAL DUCTOR	ELEC	OUND TRODE JUCTOR	SEF	P GND RVICE PPLY IDE	SEF	IP GND RVICE D SIDE	MAXIMUM CONDUCTOR DISTANCE BASED ON 2% VOLTAGE DROP
		QTY	SIZE	QTY	SIZE	QTY	SIZE	QTY	SIZE	QTY	SIZE	QTY	SIZE	AT 85% P.F.
	100	1	2 IN.	3	#1	1	#1	1	#6	1	#6	1	#8	350 FT.
	150	1	2 IN.	3	2/0	1	2/0	1	#4	1.	#4	1	#6	325 FT.
٠	200	1	2-1/2 IN.	3	4/0	1	4/0	1	#2	1	#2	-1	#6	350 FT.
	225	1	2-1/2 IN.	3	4/0	1	4/0	- 1	#2	1	#2	1	#4	300 FT.

SERVICE FEEDER NOTES:

SERVICE FEEDER NOTES:

1. DROP NEUTRIA AFTER FIRST OVER CURRENT PROTECTION DEVICE UNLESS A STANDBY GENERATOR IS PROVIDED.

2. 13M MINIMUM FOR PARALLEL PHASE, REUTRAL, OR GROUNDING ELECTROSE CONDUCTORS PER NEC.

3. SERVICE SUPPLY SIDE COUPMENT GROUNDING CONDUCTORS ARE BASED ON THE PHASE CONDUCTOR SIZE IN EACH PARALLEL CONDUIT PER NEC.

4. CONDUCTORS IN POWER COMPANY CTS ARE LIMITED TO 300MCM OR GREATER.

5. POWER FEEDER CONDUCTORS TO BE XHHW-2, 800V BATED. 6. BRANCH CIRCUIT CONDUCTORS TO BE THHW, 600V RATED.

				()	460V	МО	TOR D	EVI	CE -	TAB	LE		
Ì				*MTR					CONDU	CTORS		MAXIMUM CONDUCTOR DISTANCE BASED ON	
١	HP			PH	PHASE		UND	MOTOR STARTING AT					
ı				TRIP		Q.I.		QTY	SIZE	QTY	SIZE	10% VOLTAGE DROP A 85% P.F.	
Ī	1/2 5	1-8	2-10	15	FVNR 1	1	1 IN.	3	#12	1	#12	300 FT.	
Ì	7-1/2	11	14	20	FVNR 1	1	1 IN.	3	#10	1	#12	375 FT.	
I	10	14	18	30	FVNR 1	1	1 IN.	3	#10	1	#10	275 FT.	
Ī	15	21	27	40	FVNR 2	-1	1 IN.	3	#8	-1	#10	275 FT.	
1	20-25	27-34	34-43	50	FVNR 2	1	1 IN.	3	#8	1	#10	150 FT.	
1	30	40	50	70	FVNR 3	1	1-1/2 IN.	3	#6	1	#8	225 FT.	
- [40	52	65	100	FVNR 3	1	1-1/2 IN.	3	#4	1	#8	275 FT	

* COORDINATE SIZE WITH MOTOR MANUFACTURER. ADJUST GROUND CONDUCTOR SIZE ACCORDINGLY.

* WHERE ODD SIZE HP, GO TO NEXT GREATER HP.

* POWER FEEDER CONDUCTORS TO BE XHHW-2, 600V RATED.

* BRANCH CIRCUIT CONDUCTORS TO BE THHW, 600V RATED.

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				COGO CHECKED BY:
				QA/QC BY: DATE: QA/QC REVISIONS BY:
10.	REVISION	DATE	BY	du de lin iniene ni



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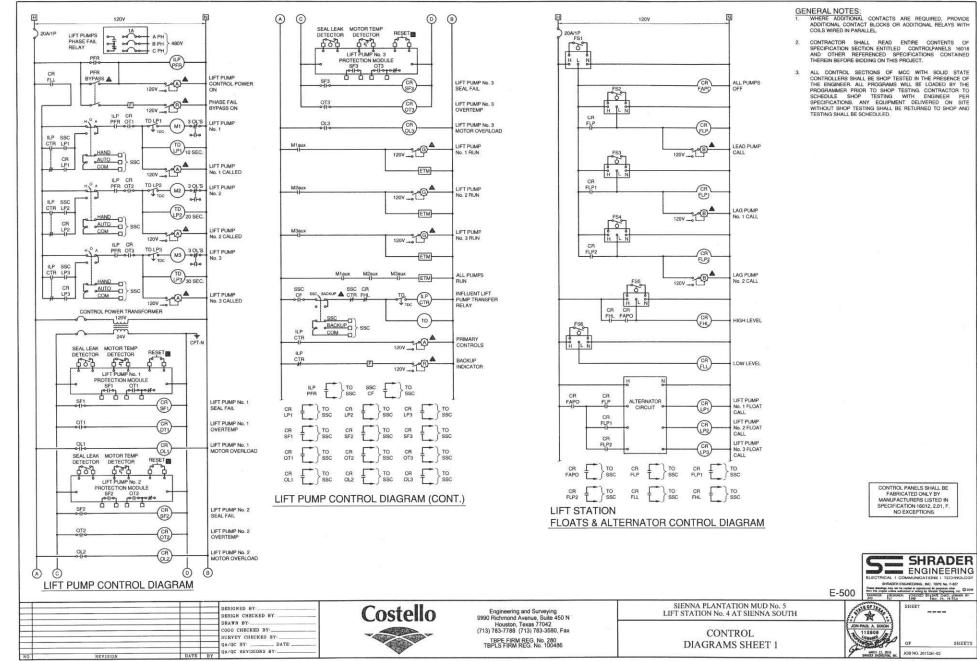
SIENNA PLANTATION MUD No. 5 LIFT STATION No. 4 AT SIENNA SOUTH

SCHEDULES

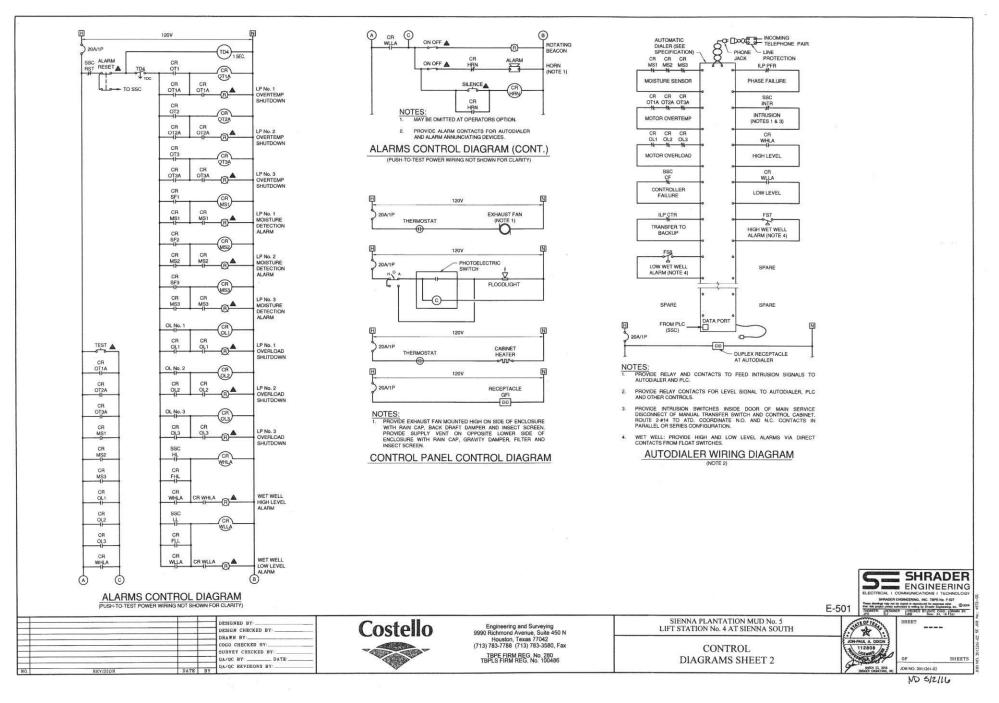


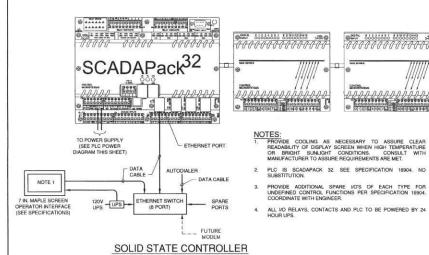
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JOB NO. 2015261-02



N 5/2116





FROM UPS

120 VOLT, 60Hz.

SURGE PROTECTOR
TELEMATIC SD150X

OPEN
@ 90° F

CONTROL POWER
TRANSFORMER

120 VAC

m

24 VDC

PLC POWER DIAGRAM

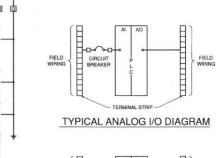
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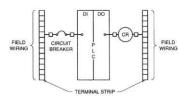
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0.5A

SSC POWER ON

24 VDC





TYPICAL DISCRETE I/O DIAGRAM

	DIGITAL INPUT LOWER MODULE I/O SCHEDULE						
TEM	I/O MOD. NOTE	DESCRIPTION	ADD. REF.	POINT	VO TYPE	NOTE/NORMAL STATE/SCALE	
1		LP1 HOA HAND		0	DI	SW_HAND	
2		LP1 HOA AUTO	1.5	1	DI	SW_AUTO	
3		LP1 RUN STATUS	-	2	DI	M1aux	
4		LP1 OVERTEMP ALARM		3	DI	CR_OT1	
5		LP1 SEAL ALARM	1.80	4	DI	CR_SF1	
6		LP1 OVERLOAD ALARM		5	DI	CR_OL1	
7		LP1 CALLED (BACKUP)		6	DI	CR_LP1	
8		SPARE	- 2	7	DI		
9		LP2 HOA HAND		8	DI	SW_HAND	
10		LP2 HOA AUTO	370	9	DI	SW_AUTO	
11		LP2 RUN STATUS	-	10	DI	M2aux	
12		LP2 OVERTEMP ALARM	-	11	DI	CR_OT2	
13		LP2 SEAL ALARM		12	DI	CR_SF2	
14		LP2 OVERLOAD ALARM	- 14	13	DI	CR_OL2	
15		LP2 CALLED (BACKUP)		14	DI	CR_LP2	
16		SPARE	1 1	15	DI		

DIGITAL INPUT EXPANSION MODULE #2 I/O SCHEDULE						
ITEM	MOD. NOTE	DESCRIPTION	ADD. REF.	POINT	VO TYPE	NOTE/NORMAL STATE/SCALE
1	5404	SPARE	- 2	0	DI	
2		PRIMARY CNTRL (PLC MODE)		1	DI	SW_SSC
3		SECONDARY CNTRL (AUTOSENSORY)	-	2	DI	SW_BACKUP
4		CONTROL TRANSFER	-	3	DI	ILP_CTR
5		PLC ALARM RESET	-	4	DI	PB_ARS
6		PHASE FAIL RELAY (PFR)	-	5	DI	ILP_PFR
7		CONTROL PANEL INTRUSION		6	DI	INTRUSION
8		SERVICE RACK INTRUSION		7	DI	INTRUSION
9		SPARE	2	8	DI	
10		SPARE	18	9	DI	
11		LOW LEVEL FLOAT		10	DI	CR_FLL
12		ALL PUMP OFF FLOAT		11	DI	CR_FAPO
13		LP FLOAT	4	12	DI	CR_FLP
14		LP1 FLOAT	W.	13	DI	CR_FLP1
15		LP2 FLOAT		14	DI	CR_FLP2
16		HIGH LEVEL FLOAT		15	DI	CR_FHL

		ANALOG LOWER I			DUL	E
ITEM	I/O MOD. NOTE	DESCRIPTION	ADD. REF.	POINT	I/O TYPE	NOTE/NORMAL STATE/SCALE
1.		WET WELL LEVEL		0	Al	4-20mA
2		SPARE	7	1	Al	
3		SPARE		2	Al	- 4
4		SPARE		3	Al	
5		SPARE	10	4	Al	
6		SPARE		5	Al	
7		SPARE	-	6	Al	35
8		SPARE	26	7	Al	

ITEM	MOD. NOTE	DESCRIPTION	ADD. REF.	POINT	TYPE	NOTE/NORMAL STATE/SCALE
1	5404	LP3 HOA HAND	1950	0	DI	SW_HAND
2		LP3 HOA AUTO	-	1	DI	SW_AUTO
3		LP3 RUN STATUS	-	2	DI	M3aux
4		LP3 OVERTEMP ALARM	0.0	3	Di	CR_OT3
5		LP3 SEAL ALARM	0.00	4	DI	CR_SF3
6		LP3 OVERLOAD ALARM	36	5	DI	CR_OL3
7		LP3 CALLED (BACKUP)		6	DI	CR_LP3
8		SPARE	(6)	7	DI	
9		SPARE		8	DI	
10		SPARE	-	9	DI	
11		SPARE		10	DI	
12		SPARE		11	DI	
13		SPARE		12	DI	
14		SPARE	-	13	DI	
15		SPARE	(a)	14	DI	
16		SPARE		15	DI	

DICITAL INDUT EVDANCION MODULE #4

	C	OIGITAL LOWER OU 1/O SCHEI		MO	DUI	LE
ITEM	MOD. NOTE	DESCRIPTION	ADD. REF.	POINT	I/O TYPE	NOTE/NORMAL STATE/SCALE
1		LP1 START/STOP	1.63	0	DO	SSC_LP1
2		LP2 START/STOP	-	1	DO	SSC_LP2
3		LP3 START/STOP	-	2	DO	SSC_LP3
4		SPARE		2	DO	
5		PLC TRANSFER (SSC-CTR)	100	4	DO	SSC_CTR
6		SPARE	1.3	5	DO	- 90
7		SPARE		6	DO	188 607
8		INTRUSION	(0)	7	DO	SSC_INTR
9		WET WELL LOW LEVEL	1 100	8	DO	SSC_LL
10		WET WELL HIGH LEVEL	-	9	DO	SSC_HL
11		PLC FAIL	1000	10	DO	SSC_CF
12		ALARM RESET		11	DO	SSC_RST

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SIENNA PLANTATION MUD No. 5 LIFT STATION No. 4 AT SIENNA SOUTH

SOLID STATE CONTROLLER



E-510

SHEET

OF SHEETS

204 JOB NO. 2015261-02

LID STATE CONTROLLER

				DESIGNED BY:
				COGO CHECKED BY:
				SURVEY CHECKED BY: DATE:
NO.	REVISION	DATE	BY	QA/QC REVISIONS BY:

VENTILATION

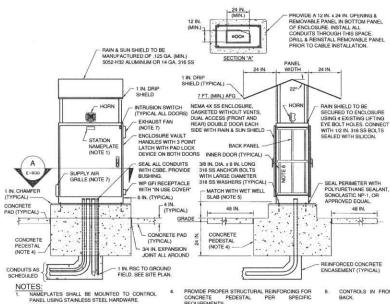
50 WATT CONDENSATION

HEATER



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TBPE FIRM REG. No. 280 TBPLS FIRM REG. No. 100486



UNLESS OTHERWISE NOTED, ALL EXPOSED CONDUITS SHALL BE PVC COATED RIGID GALVANIZED STEEL

UNLESS OTHERWISE NOTED, ALL NUTS, BOLTS, SCREWS WASHERS, ETC SHALL BE TYPE 316 STAINLESS STEEL.

CONCRETE REQUIREMENTS.

BASE OF ENCLOSURE TO BE 12 IN. ABOVE FINISHED GRADE AND NOT LESS THAN 12 IN. ABOVE FILODD PLAIN ELEVATION. PROVIDE WORK PLATFORM IF FLOOD CONDITIONS REQUIRE THE ENCLOSURE BASE TO BE MORE THAN 12 IN. ABOVE GRADE. CONTROLS IN FRONT AND POWER DEVICES IN

PROVIDE EXHAUST FAN IN ALL CONTROL PANELS WITH OUIS, PLC'S OR OTHER TEMPERATURE SENSITIVE ELECTRONIC DEVICES. PROVIDE INSECT SCREEN, FILTER AND GRAVITY DAMPER AT INLET GRILLE. PROVIDE INSECT SCREEN, AND GRAVITY DAMPER AT EXHAUST FAN. PROVIDE RAIN HOOD THAT PREVENTS ENTRY OF HEAVY BAINS

PROVIDE 120V RECEPTACLE AND SPACE FOR FUTURE FIBER MODEM NEAR ETHERNET SWITCH.

MARKER TAPE TO MARKER TAPE READ "ELECTRICAL" DUCTBANK WITH RED 2/0 BARE Cu CONCRETE ENCASEMENT 30 1 SMOOTH FINISH AND NO CONCRETE OVERFLOW SPOILS 0 TELEPHONE STIRRUP CONDUIT (TYPICAL) (QUANTITY VARIES) #4 REBAR CONDUIT SPACER (TYPICAL) CONDUIT DEPTH PER NEC **DUCTBANK**

GRADE

CONSTRUCTION DETAIL

REMOVABLE COVER OF CAST CONCRETE. TOP OF COVER TO BE FLUSH WITH TOP OF FLUSH LIFTING RING NATURAL GROUND, CONCRETE OR ASPHALT SURFACE. "U" BOLT EXOTHERMIC WELDED CONNECTION 10 IN. VITRIFIED CLAY PIPE OR REINFORCED CONCRETE PIPE 2/0 BARE Cu UNLESS SHOWN OTHERWISE ON PLAN OR SPECIFICALLY DESCRIBED COPPERWELD GROUND ROD (NOTE 1) IN SPECIFICATIONS

NOTE:

1. GROUND ROD SHALL BE 3/4 IN. x 20 FT. FOR SURGE PROTECTION GROUND AND LIGHTNING PROTECTION SYSTEMS. ALL OTHER APPLICATIONS SHALL BE 3/4 IN. x 10 FT.

3 GROUND WELL DETAIL

CONTROL CABINET ENCLOSURE AND FOUNDATION

DESIGNED BY: DESIGN CHECKED BY DRAWN BY: COGO CHECKED BY: SURVEY CHECKED BY: QA/QC BY: _____ DATE: QA/QC REVISIONS BY:



Engineering and Surveying 9990 Richmond Avenue, Suite 450 N Houston, Texas 77042 (713) 783-7788 (713) 783-3580, Fax TBPE FIRM REG. No. 280 TBPLS FIRM REG. No. 100486

SIENNA PLANTATION MUD No. 5 LIFT STATION No. 4 AT SIENNA SOUTH

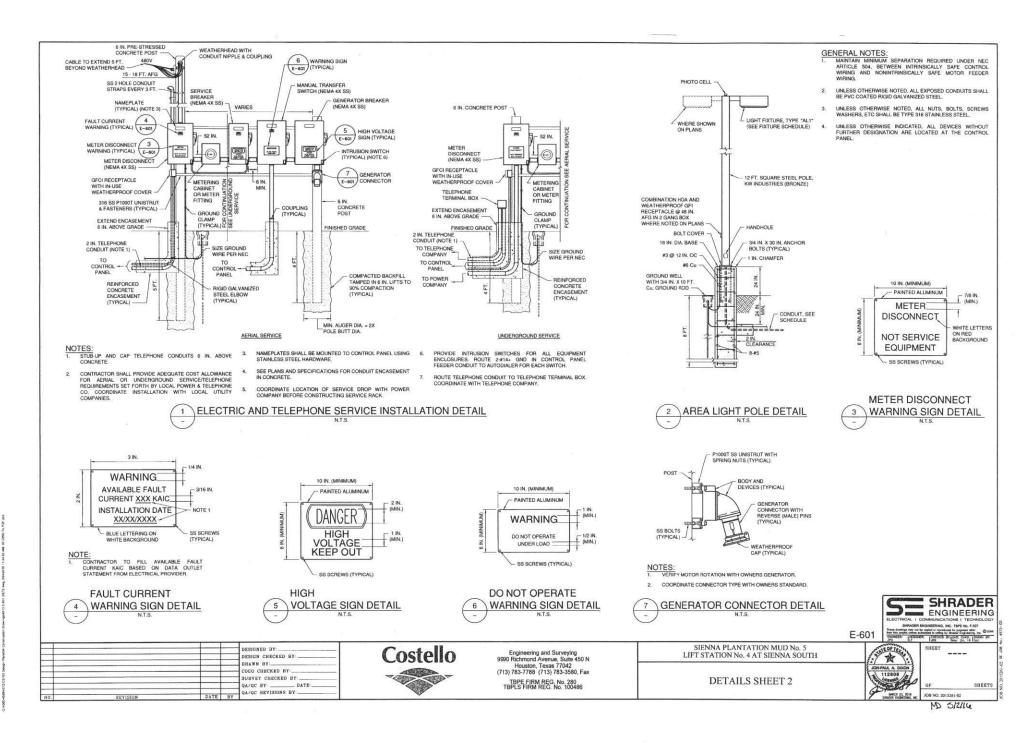
DETAILS SHEET 1

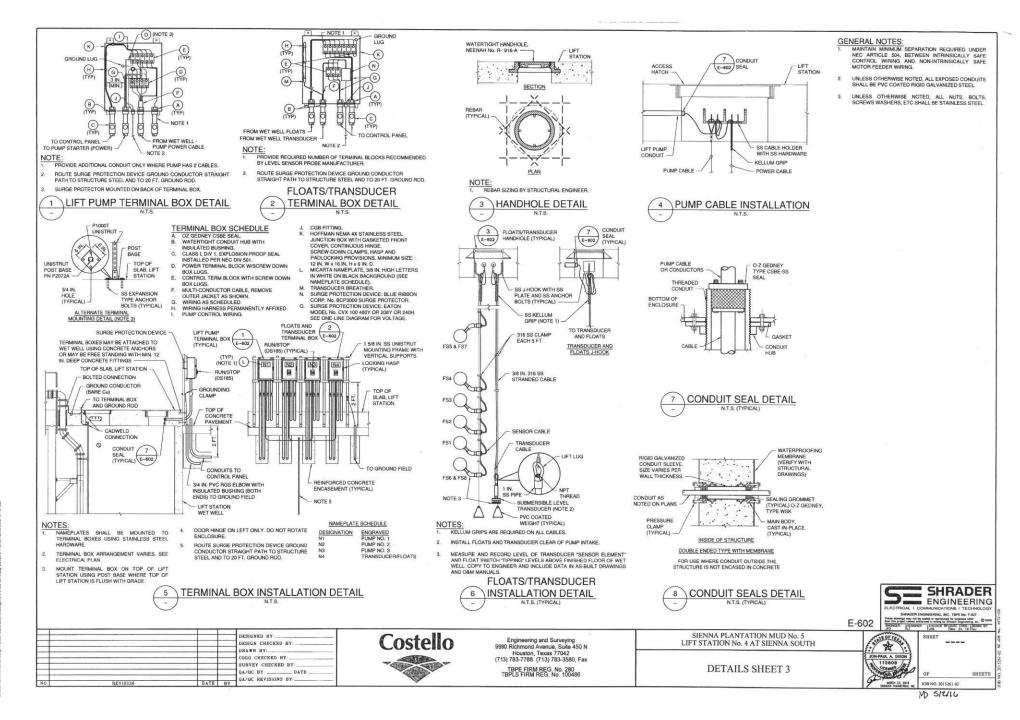


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