



**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](mailto:Permits@fortbendcountytx.gov)

☐

**Right of Way Permit**

☒

**Commercial Driveway Permit**

Permit No: 2017-16004

The following "Notice of Proposed Cable, Conduit, and/or Pole Line activity in Fort Bend County" and accompanying attachments have been reviewed and the notice conforms to appropriate regulations set by Commissioner's Court of Fort Bend County, Texas.

**(1) COMPLETE APPLICATION FORM:**

X
X
X

a. Name of road, street, and/or drainage ditch affected.

b. Vicinity map showing course of directions

c. Plans and specifications

**(2) BOND:**

☐

County Attorney, approval when applicable.

☐

Perpetual bond currently posted.

Bond No: \_\_\_\_\_

Amount: \_\_\_\_\_

☒

Performance bond submitted.

Bond No: XXXXXXXXXX

Amount: \$50,000.00

☐

Cashier's Check

Check No: \_\_\_\_\_

Amount: \_\_\_\_\_

**(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):**

\_\_\_\_\_  
Drainage District Approval

\_\_\_\_\_  
Date

**We have reviewed this project and agree it meets minimum requirements.**

*Charles O. Ay*

Permit Administrator

10/13/2017

Date



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 [REDACTED]

THE STATE OF TEXAS           §

KNOW ALL MEN BY THESE PRESENTS:

COUNTY OF FORT BEND       §

THAT WE, Sovereign Builders, Inc. dba Construction LTD whose (address, phone) is 1825 Upland Drive, Houston, TX 77043, (832) 203-6819 Texas, hereinafter called the Principal, and Berkley Insurance Company, a Corporation existing under and by virtue of the laws of the state of Delaware and authorized to do an indemnifying business in the state of Texas, and whose principal office is located at (name/address/phone) 475 Steamboat Road, Greenwich, CT, 06830, (203) 629-3000 whose officer residing in the State of Texas, authorized to accept service in all suits and actions brought whining said state is Timothy Miller and whose address is 12400 Coit Road, Suite 625, Dallas, TX 75251, 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 Fifty Thousand and No/100 Dollars (\$50,000.00) 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 19th day of September, 2017.

Sovereign Builders, Inc. dba Construction LTD  
PRINCIPAL

BY

Berkley Insurance Company  
SURETY

BY

Gloria M. Villa  
Gloria M. Villa, Attorney-in-Fact



POWER OF ATTORNEY  
BERKLEY INSURANCE COMPANY  
WILMINGTON, DELAWARE

NOTICE: The warning found elsewhere in this Power of Attorney affects the validity thereof. Please review carefully.

KNOW ALL MEN BY THESE PRESENTS, that BERKLEY INSURANCE COMPANY (the "Company"), a corporation duly organized and existing under the laws of the State of Delaware, having its principal office in Greenwich, CT, has made, constituted and appointed, and does by these presents make, constitute and appoint: *Roxanne G. Brune; David R. Groppell; Beverly A. Ireland; Sharen R. Groppell; Francine M. Hay; Kurt A. Risk; Sharon J. Cavanaugh; or Gloria M. Villa of Marsh & McLennan Agency LLC – Southwest of Houston, TX* its true and lawful Attorney-in-Fact, to sign its name as surety only as delineated below and to execute, seal, acknowledge and deliver any and all bonds and undertakings, with the exception of Financial Guaranty Insurance, providing that no single obligation shall exceed **Fifty Million and 00/100 U.S. Dollars (U.S.\$50,000,000.00)**, to the same extent as if such bonds had been duly executed and acknowledged by the regularly elected officers of the Company at its principal office in their own proper persons.

This Power of Attorney shall be construed and enforced in accordance with, and governed by, the laws of the State of Delaware, without giving effect to the principles of conflicts of laws thereof. This Power of Attorney is granted pursuant to the following resolutions which were duly and validly adopted at a meeting of the Board of Directors of the Company held on January 25, 2010:

**RESOLVED**, that, with respect to the Surety business written by Berkley Surety, the Chairman of the Board, Chief Executive Officer, President or any Vice President of the Company, in conjunction with the Secretary or any Assistant Secretary are hereby authorized to execute powers of attorney authorizing and qualifying the attorney-in-fact named therein to execute bonds, undertakings, recognizances, or other suretyship obligations on behalf of the Company, and to affix the corporate seal of the Company to powers of attorney executed pursuant hereto; and said officers may remove any such attorney-in-fact and revoke any power of attorney previously granted; and further

**RESOLVED**, that such power of attorney limits the acts of those named therein to the bonds, undertakings, recognizances, or other suretyship obligations specifically named therein, and they have no authority to bind the Company except in the manner and to the extent therein stated; and further

**RESOLVED**, that such power of attorney revokes all previous powers issued on behalf of the attorney-in-fact named; and further

**RESOLVED**, that the signature of any authorized officer and the seal of the Company may be affixed by facsimile to any power of attorney or certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligation of the Company; and such signature and seal when so used shall have the same force and effect as though manually affixed. The Company may continue to use for the purposes herein stated the facsimile signature of any person or persons who shall have been such officer or officers of the Company, notwithstanding the fact that they may have ceased to be such at the time when such instruments shall be issued.

IN WITNESS WHEREOF, the Company has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 19<sup>th</sup> day of July, 2017.

Attest:

Berkley Insurance Company

(Seal)

By Ira S. Lederman  
Executive Vice President & Secretary

By Jeffrey M. Hafter  
Senior Vice President

**WARNING: THIS POWER INVALID IF NOT PRINTED ON BLUE "BERKLEY" SECURITY PAPER.**

STATE OF CONNECTICUT )  
 ) ss:  
COUNTY OF FAIRFIELD )

Sworn to before me, a Notary Public in the State of Connecticut, this 19<sup>th</sup> day of July, 2017, by Ira S. Lederman and Jeffrey M. Hafter who are sworn to me to be the Executive Vice President and Secretary, and the Senior Vice President, respectively, of Berkley Insurance Company.

MARIA C. RUNDBAKEN  
NOTARY PUBLIC  
MY COMMISSION EXPIRES  
APRIL 30, 2019

Maria C. Rundbaken  
Notary Public, State of Connecticut

**CERTIFICATE**

I, the undersigned, Assistant Secretary of BERKLEY INSURANCE COMPANY, DO HEREBY CERTIFY that the foregoing is a true, correct and complete copy of the original Power of Attorney; that said Power of Attorney has not been revoked or rescinded and that the authority of the Attorney-in-Fact set forth therein, who executed the bond or undertaking to which this Power of Attorney is attached, is in full force and effect as of this date.

Given under my hand and seal of the Company, this 19<sup>th</sup> day of September, 2017.

(Seal)

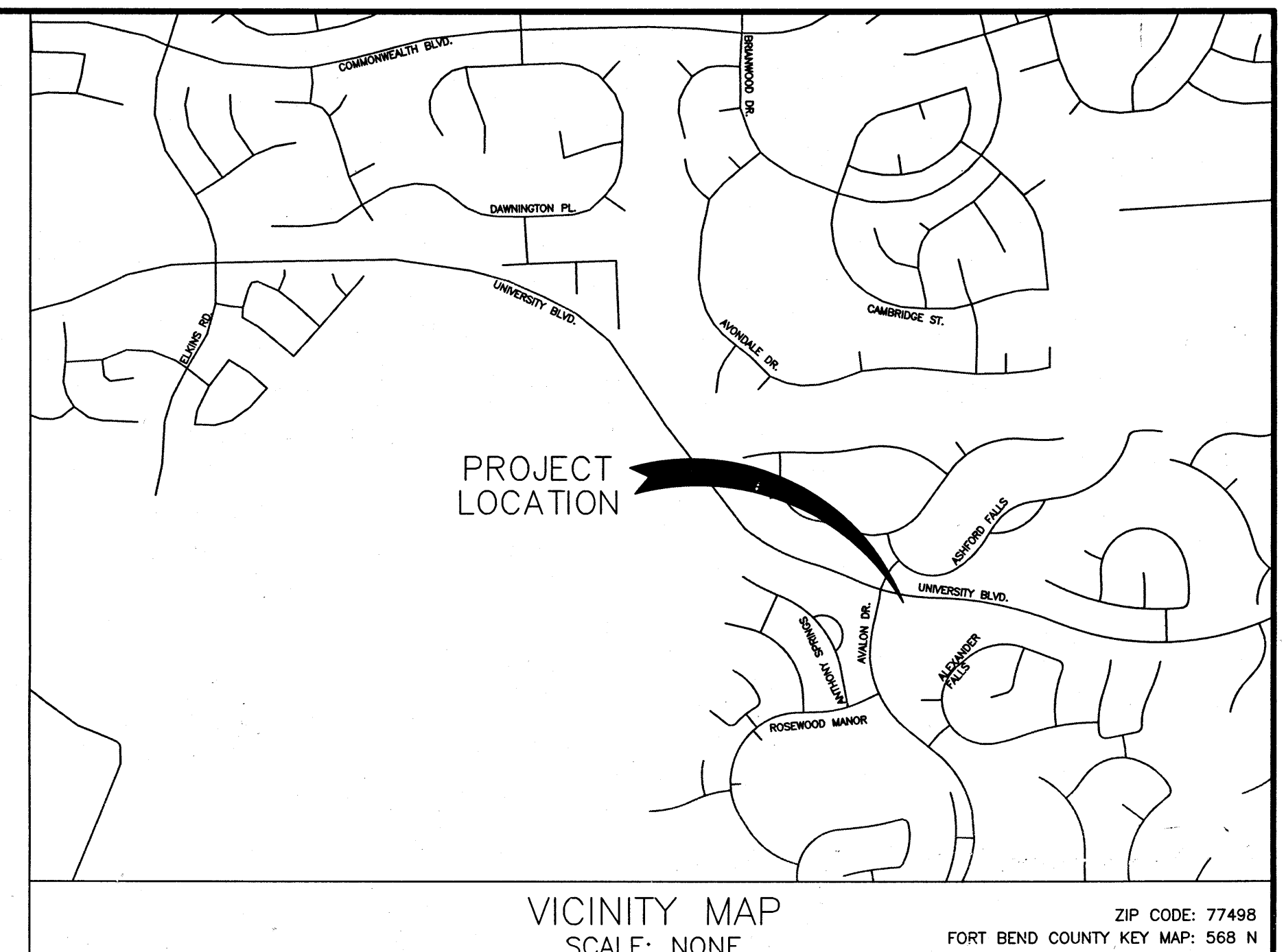
Vincent P. Forte  
Vincent P. Forte

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# FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT NO. 128

## CONSTRUCTION PLANS FOR LEFT TURN LANE AND MEDIAN OPENING TO SERVE SHOPS IN RIVERSTONE

UNIVERSITY BLVD & W. AVALON DR.  
SUGARLAND, TX 77498



LJA JOB. NO. 2423-1601P  
DATE: AUGUST 2017

### NOTES

1. THESE PLANS WERE PREPARED TO MEET OR EXCEED FORT BEND COUNTY AND CITY OF SUGARLAND SUBDIVISION RULES AND REGULATIONS (AS APPLICABLE) AS CURRENTLY AMENDED.
2. CONSTRUCTION WILL BE MONITORED BY A PROFESSIONAL ENGINEER TO INSURE COMPLIANCE WITH THE CONSTRUCTION PLANS AND SPECIFICATIONS.
3. CONTRACTOR SHALL NOTIFY THE FOLLOWING ENTITIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.  
CITY OF SUGARLAND PUBLIC WORKS DEPARTMENT (281) 275-2450  
FORT BEND COUNTY DRAINAGE DISTRICT (JWAYNE GRIGAR) (281) 342-2853  
FORT BEND COUNTY ENGINEER (281) 471-9440 Ext.222  
DOW PIPELINE COMPANY (PEDRO LAGOS) (832)490-1570  
SI-ENVIRONMENTAL (BRIAN BARE)  
EL PASO FIELD SERVICES (FORMERLY COASTAL PIPELINE) (713) 854-3903  
(STEVE SWAFFORD) (713) 456-1413  
PHILLIPS PIPELINE COMPANY (CHARLES FRETWELL) (713) 783-7788  
FORT BEND M.U.D. NO. 128 (MR. CHAD HABLINSKI, P.E.) (281) 384-2012  
LJA ENGINEERING, INC. (DION FELAN)  
4. ONLY AUTHORIZED INDIVIDUALS FROM EITHER THE TESTING COMPANY OR A REPRESENTATIVE OF LJA Engineering, Inc. HAVE THE AUTHORITY TO ADD WATER TO A CONCRETE TRUCK.  
5. CONTRACTOR SHALL CONTACT THE FOLLOWING UTILITY COMPANIES TO VERIFY THE LOCATION OF THEIR UTILITIES 48 HOURS PRIOR TO COMMENCEMENT OF EXCAVATION OR CONSTRUCTION IN THE VICINITY OF THEIR FACILITIES:  
CENTERPOINT ENERGY SOUTH OF RAILROAD (ADRIAN MORENO) (713) 945-6274  
CENTERPOINT ENERGY NORTH OF RAILROAD (MARSHA SOMMERFELD) (281) 561-3240  
SI-ENERGY GAS (RYAN HERWECK) (281) 778-6250  
G.T.E. TELEPHONE COMPANY (JESSE FLOWER) (281) 499-2574  
EN-TOUCH (WESLEY PENNIX) (281) 225-9350  
TEXAS ONE CALL 1-800-245-4545  
6. CONTRACTOR SHALL CONTACT ANY PERTINENT PIPELINE COMPANIES AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF EXCAVATION OR CONSTRUCTION IN THE VICINITY OF THEIR EASEMENTS AND/OR RIGHT-OF-WAYS.  
DOW PIPELINE COMPANY (MIKE MURDERS) (979) 655-9363  
DOW PIPELINE COMPANY (ROBBY CARR) (713) 654-3627, (979) 292-9027  
DOW PIPELINE COMPANY (CHRIS SCRUGGS) (713) 654-3623, (979) 215-8212

### NOTES CONT.

7. THE OPENING AND CLOSING OF ALL VALVES ON EXISTING WATER LINES MUST BE PERFORMED EXCLUSIVELY BY THE DISTRICT OPERATOR.  
CONTRACTOR/APPLICANT SHALL CONTACT SI ENVIRONMENTAL AT (832) 490-1610 FOR ALL REQUIRED TAPPING AND INSPECTION SERVICES  
SI-ENVIRONMENTAL (BRIAN BARE) (832) 490-1570
8. THE DISTRICT OPERATOR MUST PERFORM ALL WATER LINE BACTERIOLOGICAL TESTS.  
LJA Engineering, Inc. SHALL BE RESPONSIBLE FOR CONTACTING THE DISTRICT.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC FLOW DETOURING INCLUDING LANE CLOSURES, TRAFFIC BARRELS, SIGNAGE, AND ALL OTHER APPURTENANCES (INCIDENTAL TO BID). ONE LANE OF CONTINUAL TRAFFIC FLOW IN EACH DIRECTION SHALL REMAIN OPEN AT ALL TIMES.
10. IN THE CASE OF A CONFLICT BETWEEN THE CITY OF SUGARLAND, FORT BEND COUNTY, PLANS OR SPECIFICATIONS, THE MORE STRINGENT SHALL APPLY.
11. CONTRACTOR SHALL NOTIFY FORT BEND COUNTY ENGINEERING 48 HOURS PRIOR TO COMMENCING CONSTRUCTION AND 24 HOURS PRIOR TO ANY PAVING OPERATION AT  
EMAIL: CONSTRUCTION@FORTBENDCOUNTYTX.GOV

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I HEREBY CERTIFY THAT THESE RECORD DRAWINGS SUBSTANTIALLY REPRESENT THE CONSTRUCTED CONDITION. THE PLANS WERE PREPARED AND THE CONSTRUCTION WAS PERFORMED IN SUBSTANTIAL ACCORDANCE WITH THE CITY OF MISSOURI CITY DESIGN STANDARDS

CAROLYN E. COMER, P.E. 121806 DATE

### RECORD DRAWING

I HEREBY CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION, AND GRADE AND THAT THE CONSTRUCTION WAS IN SUBSTANTIAL COMPLIANCE WITH THE CONTRACT DOCUMENTS.

CONTRACTOR: DATE:  
TITLE:



CITY OF SUGARLAND, TEXAS  
ENGINEERING DEPARTMENT

APPROVED: *Guillermo Salcedo* P.E. Senior Eng.  
DATE: 9 Aug 2017

APPROVED FOR CONSTRUCTION

BY: DATE:

FORT BEND COUNTY ENGINEERING DEPARTMENT	
ENGINEER:	<i>Richard W. Stolleis, P.E.</i>
DATE:	8/25/17
THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS NOT COMMENCED IN (1) YEAR FROM DATE OF APPROVAL.	
APPROVED:	<i>[Signature]</i>
DEVELOPMENT COORDINATOR	
DATE:	8/16/17

ENGINEER:

**LJA Engineering, Inc.**

2929 Briarpark Drive  
Suite 600  
Houston, Texas 77042-3703

Phone 713.953.5200  
Fax 713.953.5026  
FRN-F-1386

SHEET No: 1 OF 15



GENERAL NOTES:

1. CONTACT THE ENGINEERING INSPECTORS WITH THE CITY'S ENGINEERING DEPARTMENT AT (281) 275-2780 PRIOR TO STARTING WORK TO SCHEDULE A PRE-CONSTRUCTION MEETING.
2. CONTRACTOR IS RESPONSIBLE FOR HAVING ALL BURIED UTILITIES IDENTIFIED, PROTECTED, REPLACED AND/OR PROPERLY REPAIRED IF DAMAGED. REPAIRS/REPLACEMENT SHALL BE AT CONTRACTOR'S EXPENSE.
3. CONTRACTOR SHALL OBTAIN AND MAINTAIN ON SITE ALL APPLICABLE PERMITS AND AN APPROVED COPY OF THE PLANS AND SPECIFICATIONS, NOTIFY THE CITY'S ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
4. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE CITY'S ENGINEERING DEPARTMENT 24 HOURS PRIOR TO WEEKDAY WORK REQUIRING INSPECTION INCLUDING, BUT NOT LIMITED TO, LIVING, PAVING OPERATIONS, CONCRETE PLACEMENT, FORMING AND SET-UP, DENSITIES, PIPE INSTALLATION, AND ANY TESTING BY LABORATORIES. THE ENGINEERING DEPARTMENT MAY BE REACHED AT 281-275-2780 OR BY CONTACTING THE ASSIGNED INSPECTOR.
5. ALL SATURDAY WORK SHALL BE REQUESTED, IN WRITING, WITH THE CITY'S ENGINEERING DEPARTMENT AT LEAST 48-HOURS IN ADVANCE. SUNDAY AND HOLIDAY WORK REQUIRES 72 HR. WRITTEN REQUESTS AND MUST BE APPROVED BY THE CITY ENGINEER. FAXES MAY BE SENT TO (281) 275-2771. REQUIRED INSPECTIONS MAY BE SUBJECT TO INSPECTION FEES. NON-NOTIFICATIONS MAY RESULT IN NON-COMPLIANCE, WORK ORDERED STOPPAGE AND DOUBLE INSPECTION FEES.
6. FULL-TIME RESIDENT INSPECTION BY THE PROJECT ENGINEER'S REPRESENTATIVE SHALL BE PROVIDED AT ALL CRITICAL POINTS OF CONSTRUCTION OR AS DEEMED NECESSARY BY THE CITY OF SUGAR LAND.
7. FOLLOW-UP INSPECTIONS OF ALL PUBLIC INFRASTRUCTURE SHALL BE SCHEDULED WITHIN 60 DAYS OF THE INITIAL INSPECTION. A COMPLETE RE-INSPECTION AND A NEW PUNCH LIST MAY BE REQUIRED AFTER THE 60 DAY PERIOD.
8. DESIGN AND CONSTRUCTION SHALL CONFORM TO THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS, THE CITY OF SUGAR LAND DESIGN MANUAL (ISSUED 2007), AND THE CITY OF SUGAR LAND STANDARD DETAIL SHEETS. THE CITY OF SUGAR LAND DESIGN STANDARDS SHALL BE ACQUIRED (AND USED) FROM THE ENGINEERING DEPARTMENT. THE LATEST REVISIONS AND/OR AMENDMENTS SHALL BE OBSERVED. WHERE CONFLICT MAY ARISE BETWEEN INFORMATION ON APPROVED CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS AND CITY OF SUGAR LAND STANDARDS, THEN THE CITY DESIGN STANDARDS SHALL GOVERN.
9. ALL STATIONS ARE CENTERLINE OF STREET RIGHT-OF-WAY UNLESS OTHERWISE NOTED ON THE PLANS. EXCEPT IN SIDE OR BACK LOT EASEMENTS WHERE CENTERLINE IS CENTER OF PIPE. IN EASEMENTS WHERE SANITARY AND STORM SEWER ARE PRESENT PARALLEL, STATIONS SHALL BE BASED ON CENTERLINE OF STORM SEWER PIPING.
10. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. ANY DRAINAGE AREA OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE CITY OF SUGAR LAND. ALL CONSTRUCTION STORM RUNOFF SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF SUGAR LAND DESIGN STANDARDS. IF NON-COMPLIANCE OCCURS, CONTRACTOR SHALL REMEDY IMMEDIATELY AT HIS OWN EXPENSE.
11. ANY POLLUTION CONTROL DEVICE, SOD, OR SEEDED AREA DAMAGED, DISTURBED, OR REMOVED SHALL BE REPLACED OR REPAIRED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR WATERING ANY SEED OR SOD WHICH HE HAS INSTALLED UNTIL ADEQUATE GROWTH IS ACHIEVED TO PREVENT EROSION.
12. 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 SUGAR LAND.
13. ANY MATERIALS OR WORKMANSHIP NOT MEETING OR EXCEEDING CITY OF SUGAR LAND STANDARDS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
14. THE CONTRACTOR SHALL KEEP THE STREETS, RIGHT-OF-WAY, AND WORK AREA CLEAN OF DIRT, MUD, AND DEBRIS AS NEEDED OR AS REQUIRED BY CITY STAFF.
15. 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 SUGAR LAND.
16. THE CONTRACTOR SHALL CONTACT THE CITY OR LOCAL MUD AS APPROPRIATE TO OPERATE EXISTING UTILITIES AND PRIOR TO MOVING OR CROSS OVER ANY EXISTING PAVEMENT OR CURB.
17. ALL BACKFILL WITHIN PUBLIC RIGHTS-OF-WAY OR EASEMENTS SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY (IN 8 INCH LIFTS) AND TESTED FOR ±2% OPTIMUM MOISTURE BY AN APPROVED LAB.
18. IT IS PERMISSIBLE TO USE A BACKFILL FOR TRENCH EXCAVATION IN LIEU OF A TRENCHING MACHINE.
19. THE CONTRACTOR SHALL NEVER UNLOAD ANY TRACK-TYPE VEHICLE OR EQUIPMENT ON ANY EXISTING PAVEMENT OR CROSS OVER ANY EXISTING PAVEMENT OR CURB.
20. ALL FINISH GRADES ARE TO CONFORM TO A MINIMUM SLOPE OF 6" PER 100 FT. POSITIVE DRAINAGE IS DENOTED BY ARROWS.
21. CONTRACTOR SHALL UNCOVER EXISTING UTILITIES AT ALL "POINTS OF CROSSING" TO DETERMINE IF CONFLICTS EXIST BEFORE COMMENCING ANY CONSTRUCTION. NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICT.
22. ALL FINISHED GRADES SHALL VARY UNIFORMLY BETWEEN FINISHED ELEVATIONS.
23. ALL TESTING PROCEDURES SHALL CONFORM TO THE CITY OF SUGAR LAND STANDARDS. THE INITIAL TESTING EXPENSE SHALL BE BORNE BY THE OWNER. IF ANY OF THE TESTS DO NOT MEET THE TESTING STANDARDS, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMOVE OR REPLACE SUCH MATERIAL. SO THE TESTING STANDARDS CAN BE MET. ADDITIONAL TESTING TO MEET COMPLIANCE SHALL BE AT THE CONTRACTOR'S EXPENSE.
24. CONTRACTOR SHALL PROVIDE SHEETING, SHORING, AND BRACING AS NECESSARY TO PROTECT WORKMEN AND EXISTING UTILITIES DURING ALL PHASES OF CONSTRUCTION AS PER O.S.H.A. REQUIREMENTS.
25. ALL MATERIALS AND WORKMANSHIP NOT GOVERNED BY CITY STANDARDS SHALL CONFORM TO THE LATEST VERSION OF THE TxDOT STANDARD SPECIFICATIONS AND THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, AND ANY REVISIONS THERETO.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING AND PROTECTING ALL MATERIALS AND EQUIPMENT STORED ON THE JOBSITE IN A SAFE AND WORKMAN-LIKE MANNER (DURING AND AFTER WORKING HOURS), UNTIL JOB COMPLETION.
27. THE LOADING AND UNLOADING OF ALL PIPE, VALVES, HYDRANTS, MANHOLES, AND OTHER ACCESSORIES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED PRACTICES AND SHALL BE PERFORMED WITH CARE TO AVOID ANY DAMAGE TO THE MATERIAL. THE CONTRACTOR SHALL LOCATE AND PROVIDE THE NECESSARY STORAGE AREAS FOR MATERIAL AND EQUIPMENT.
28. 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 SUGAR LAND STANDARDS.
29. NO PRIVATE UTILITIES (I.E., PHONE, CABLE T.V., ELECTRICITY, ETC.) SHALL BE INSTALLED WITHIN 4 FEET BACK OF CURB.
30. PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE REGISTERED PROFESSIONAL ENGINEER(S) HEREON DOES NOT EXTEND TO ANY SUCH SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THE PLANS. THE CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS, INCLUDING CURRENT OSHA STANDARDS FOR TRENCH SAFETY SYSTEMS, SEALED BY A LICENSED PROFESSIONAL ENGINEER. APPROPRIATE TRENCH SAFETY PLANS SHALL BE SUBMITTED BY THE CONTRACTOR PRIOR TO EXECUTION OF A CONTRACT FOR HIS WORK.
31. FOR TRAFFIC SIGNAL CONSTRUCTION, CONTACT THE CITY OF SUGAR LAND INFORMATION TECHNOLOGY DEPARTMENT TO OBTAIN IP ADDRESSES FOR SIGNAL CABINET EQUIPMENT. ALLOW 5 WORKING DAYS FOR THE ADDRESS. ONCE EQUIPMENT HAS BEEN INSTALLED AND COMMUNICATIONS ESTABLISHED WITH THE TRAFFIC MANAGEMENT CENTER, IT WILL COMMISSION THE COMMUNICATION LINK. ALLOW 10 WORKING DAYS FOR COMMISSIONS.

CONCRETE/PAVING NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND AUTHORIZATION REQUIRED BY CITY OF SUGAR LAND.
2. CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED PRIOR TO CONSTRUCTION AND WILL REPAIR OR REPLACE ANY DAMAGE AT CONTRACTOR'S EXPENSE.
3. PAVING CONTRACTOR SHALL PROTECT WATER, SEWER, AND DRAINAGE FACILITIES AND WILL REPLACE ANY DAMAGED FACILITIES AT HIS OWN EXPENSE. ALL MANHOLES AND VALVES WITHIN THE PAVEMENT AREA SHALL BE ADJUSTED TO FINISH GRADE BY THE PAVING CONTRACTOR WITH THE USE OF APPROVED BLOCKOUTS.
4. WHEN THE TOP OF CURB OR BOTTOM OF SIDEWALK SLAB ELEVATION VARIES FROM THE NATURAL GROUND, THE PAVING CONTRACTOR SHALL BACKFILL IN LAYERS NOT EXCEEDING 8-INCHES IN DEPTH. EACH LAYER WILL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY. THE DISTURBED AREA SHALL BE SEED, SODDED, FERTILIZED, AND/OR SILT BARRIER FENCED WITHIN 10 WORKING DAYS. THE TYPE OF POLLUTION CONTROL WILL BE DETERMINED BY THE APPROVED PLANS AND/OR THE CITY OF SUGAR LAND CITY ENGINEER.
5. ALL PAVING SHALL BE IN ACCORDANCE WITH THE CITY OF SUGAR LAND DESIGN STANDARDS, APPROVED PLANS AND SPECIFICATIONS WITH THE LATEST REVISIONS OR AMENDMENTS. IN THE EVENT OF A CONFLICT, THE CITY OF SUGAR LAND DESIGN STANDARDS GOVERN.
6. PAVING CONTRACTOR SHALL PROVIDE AND MAINTAIN SILT PROTECTION FENCES ON ALL STAGE 1 CURB INLETS. THE PAVING CONTRACTOR SHALL MAINTAIN ANY OTHER POLLUTION CONTROLS ESTABLISHED, I.E., ADDITIONAL SILT BARRIERS, SAND BAGS, ETC., FOR THE DURATION OF THE PROJECT. ANY DAMAGED OR MISSING DEVICES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
7. EXISTING PAVEMENTS, CURBS, SIDEWALKS, DRIVEWAYS, ETC., DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE REPLACED TO THE CITY OF SUGAR LAND STANDARDS AT THE CONTRACTOR'S EXPENSE.
8. 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.
9. ALL DRIVEWAYS WILL BE LOCATED TO AVOID EXISTING CURB INLET STRUCTURES.
10. REDWOOD AND KEYWAYS SHALL NOT INTERSECT WITHIN 2 FEET OF AN INLET.
11. AT INITIAL AND FINAL INSPECTIONS THE PAVEMENT WILL BE FLOODED TO CHECK FOR BIRDBATHS AND CRACKS. FLOODING OF STREETS SHALL OCCUR 1 HOUR PRIOR TO INSPECTION.
12. ALL CONCRETE PLACED SHALL BE UNIFORMLY SPRAYED WITH A MEMBRANE CURING COMPOUND AS DESCRIBED IN ITEM 526 IN THE TxDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. IMPROPER APPLICATION WILL RESULT IN THE REJECTION OF THE CONCRETE.
13. SK (6) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 REBAR, 24" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE CONSTRUCTION FOR LOCAL STREETS.
14. SEVEN (7) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 REBAR, 18" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE CONSTRUCTION FOR COLLECTOR STREETS.
15. EIGHT (8) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 18" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE FOR ARTERIAL STREETS.
16. ALL INTERSECTIONS SHALL BE CONSTRUCTED WITHIN EACH STREET RIGHT-OF-WAY IN ACCORDANCE WITH THE TEXAS ACCESSIBILITY STANDARD, THE AMERICAN DISABILITIES ACT, AND THE CITY OF SUGAR LAND STANDARDS (LATEST REVISIONS). (NO BLOCKOUTS)
17. CONCRETE SIDEWALKS SHALL BE CONSTRUCTED WITHIN EACH STREET RIGHT-OF-WAY IN ACCORDANCE WITH THE CITY OF SUGAR LAND, THE A.D.A., AND THE T.A.S. STANDARDS (LATEST REVISIONS).
18. CRACKS LARGER THAN 1/16-INCH ARE NOT ACCEPTABLE IN NEW PAVEMENT. CRACKS 1/16-INCH OR LESS SHALL BE ADDRESSED ON AN INDIVIDUAL BASIS BY DRILL AND EPOXY INJECTION, SUBJECT TO APPROVAL OR REJECTION.
19. PROPER TESTING AND LAB DOCUMENTATION IS REQUIRED. FAILURE TO MEET THE MINIMUM PAVEMENT REQUIREMENTS WILL RESULT IN THE REJECTION OF SAID PAVEMENT. IMMEDIATE REMOVAL AND REPLACEMENT OF SUBSTANDARD PAVEMENT SECTIONS WILL BE NECESSARY TO SATISFY THESE REQUIREMENTS.
20. 4-INCH CONCRETE CYLINDERS, SLUMP, AND AIR ENTRAINMENT TESTS ARE REQUIRED FOR EACH 100 CUBIC YARDS OF CONCRETE PAVING WITH A MINIMUM OF ONE SET OF 4 PER PAVEMENT. THE CITY OF SUGAR LAND RESERVES THE RIGHT TO REQUEST ANY ADDITIONAL TESTS AT THE CONTRACTOR'S EXPENSE, IF ANY MATERIAL APPEARS BELOW STANDARDS.
21. NO. 3 REBAR, 18-INCH C.C. E.W. IS THE MINIMUM ACCEPTABLE FOR SIDEWALKS, NUMBER 4-REBAR, 24-INCH C.C. EACH WAY IS THE MINIMUM ACCEPTABLE FOR COMMERCIAL APPROACHES, HANDICAP RAMPS, RESIDENTIAL APPROACHES AND DRIVEWAYS.
22. COLD WEATHER PRECAUTIONS. CONCRETE PAVEMENT SHALL NOT BE PLACED WHEN THE AMBIENT TEMPERATURE IS 40°F AND FALLING. CONCRETE MAY BE PLACED IF THE AMBIENT TEMPERATURE IS 35°F AND RISING. CONTRACTOR SHALL PROVIDE AN APPROVED COVERING MATERIAL (COTTON MATS, POLYETHYLENE SHEETING, ETC.) IN THE EVENT TEMPERATURE SHOULD FALL BELOW 32°F. NO SALT OR OTHER CHEMICALS SHALL BE ADDED TO CONCRETE TO PREVENT FREEZING.
23. HOT WEATHER. NO CONCRETE PAVEMENT MIXTURE SHALL BE PLACED IF THE MIXTURE TEMPERATURE IS ABOVE 95°F. AIR AND WATER REDUCER ARE REQUIRED IF MIXTURE TEMPERATURE REACHES 85°F OR ABOVE.
24. IF NO AIR AND WATER REDUCER 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 MINUTES PAST BATCH TIME.
25. STRUCTURE TEMPERATURES AND TIMING FOR CONCRETE PLACEMENT MAY VARY. REFER TO TxDOT STANDARDS ITEM 420 FOR DETAILS.
26. TRANSVERSE EXPANSION JOINTS SHALL BE PLACED AT ALL POINTS OF CURVATURE, POINTS OF TANGENCY AND ALL INTERSECTION CURB RETURN POINTS. MAXIMUM SPACING SHALL BE 200' AND BE SEALED WITH SEALANT CONFORMING TO TxDOT ITEM 360 (& ITEM 438) AND TxDOT DMS-6310, CLASS 2.
27. CONTROL JOINTS SHALL BE PLACED AT 20' C-C.
28. EXPANSION JOINT LAYOUT FOR INTERSECTIONS SHALL BE PROVIDED BY ENGINEER FOR CITY APPROVAL.
29. NO WIRE MESH IS ALLOWED IN ANY CONCRETE WITHIN THE CITY LIMITS OR ETC.
30. ALL REBAR SHALL BE 100% TIED. OVERLAPS SHALL BE DOUBLE TIED MINIMUM. REINFORCED STEEL BE A MINIMUM 60% COVERAGE.
31. ALL NEW CURB REQUIRES 3,000 P.S.I. @ 28-DAYS. A CONCRETE CYLINDERS, SLUMP, AND AIR ENTRAINMENT TESTS ARE REQUIRED FOR EACH 50 CUBIC YARDS OF CONCRETE CURB WITH A MINIMUM OF ONE SET OF 4 PER PAVEMENT.
32. A CITY INSPECTOR MUST BE PRESENT ON ALL PROOF ROLLS, LIME DEPTH CHECKS AND DENSITY TESTS AND MUST BE CONTACTED AT LEAST 24 HOURS PRIOR TO THE TEST.
33. CONCRETE MIX DESIGN MUST BE SENT TO THE CITY FOR APPROVAL A MINIMUM 72 HOURS BEFORE THE FIRST CONCRETE POUR.
34. FOR A REGULAR MIX, SLUMP SHALL BE A MAXIMUM OF 5". FOR A MIX WITH A WATER REDUCER, SLUMP SHALL BE A MAXIMUM OF 6".
35. VEHICLES OF ALL TYPES ARE PROHIBITED FROM DRIVING ON NEW PAVEMENTS SEVEN (7) DAYS AFTER THE CONCRETE POUR AND UNTIL THE CONCRETE HAS REACHED A MINIMUM OF 3,000 PSI.
36. PAVEMENT PROTECTION SUCH AS A DIRT LAYER OF AT LEAST 12" IS REQUIRED FOR TRACK EQUIPMENT AT PAVEMENT CROSSINGS.
37. IN LIEU OF MECHANICALLY CONTROLLED VIBRATORS CONTROLLED BY A SLIP-FORM PAVING MACHINE, HAND MANIPULATED MECHANICAL VIBRATORS SHALL BE USED FOR PROPER CONSOLIDATION OF CONCRETE IN ALL PAVEMENT AREAS (ALONG FORMS, AT JOINTS, ETC.).
38. ALL CONCRETE STREETS AND BRIDGE SURFACES SHALL HAVE A "BROOM FINISH" FINISH, WHILE ALL OTHER CONCRETE PLACEMENT SHALL HAVE A MEDIUM BROOM FINISH.
39. ALL PAVEMENT MARKINGS TO BE DONE IN CONFORMANCE WITH THE LATEST VERSION OF TMUTCD AND TxDOT STANDARD SPECIFICATIONS AND ANY REVISIONS THERETO.
40. REFER TO GENERAL NOTES.

CEMENT STABILIZED SAND:

1. ALL STABILIZED SAND SHALL BE A MINIMUM OF 1.5 SK PER CUBIC YARD.
2. CEMENT STABILIZED SAND (C.S.S.) SHALL ACHIEVE A MINIMUM OF 100 PSI WITHIN 48 HOURS.
3. A MINIMUM OF 2 RANDOM SAMPLES SHALL BE TAKEN EACH WEEK. (FOR SMALLER PROJECTS, ONE SAMPLE MAY SUFFICE WITH CITY OF SUGAR LAND APPROVAL.) THE CITY OF SUGAR LAND RESERVES THE RIGHT TO REQUIRE ADDITIONAL TESTS, AT THE CONTRACTORS EXPENSE IF IT IS DEEMED NECESSARY.
4. ANY C.S.S. NOT MEETING CITY OF SUGAR LAND STANDARDS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
5. BOTH CEMENT CONTENT AND COMPRESSIVE TESTS SHALL BE CONDUCTED ON C.S.S. SAMPLES.
6. ALL C.S.S. SHALL BE COMPACTED IN MAXIMUM OF 8-INCH LIFTS AND REQUIRED TO REACH A MINIMUM DENSITY OF 95%. 7. REFER TO GENERAL NOTES.

BANK SAND:

1. BANK SAND IS DEFINED AS A WELL-GRADED SAND, FREE OF SILT, CLAY, FRAGILE OR SOLUBLE MATERIALS AND ORGANIC MATTER, MEETING THE UNIFIED SOILS CLASSIFICATIONS SYSTEM GROUP SYMBOL SW CRITERIA WITH A PLASTICITY INDEX OF LESS THAN 10. NO MORE THAN 12% OF MATERIAL CAN PASS THE NO. 200 SIEVE.

ASPHALT - OILS AND EMULSIONS:

1. CONTRACTOR SHALL VERIFY LINES AND GRADES AND THAT COMPACTED BASE IS READY TO SUPPORT LOADS.
2. BASE MATERIAL SHALL BE DRY AND THOROUGHLY CLEAN OF LOOSE MATERIAL PRIOR TO APPLICATION.
3. OILS & EMULSION SHALL BE DISTRIBUTED EVENLY AND SMOOTHLY UNDER PRESSURE NECESSARY FOR PROPER DISTRIBUTION.
4. MAINTAIN REQUIRED SURFACE CONDITIONS UNTIL ACCEPTED BY THE CITY OF SUGAR LAND.
5. PRIME COAT SHALL BE M.C.-30, M.C.-70 OR E.P.R.1 PRIME AND SHALL COMPLY WITH TxDOT STANDARDS APPROVED BY THE CITY ENGINEER. LIME OPERATIONS SHALL NOT BE STARTED WHEN THE AMBIENT AIR TEMPERATURE IS BELOW 40°F AND FALLING. LIME MAY, WITH APPROVAL, BE STARTED WHEN THE AMBIENT AIR TEMPERATURE IS 30°F AND RISING. LIME SHALL NOT BE PLACED WHEN WEATHER CONDITIONS, IN THE ENGINEER'S OPINION, ARE UNSUITABLE.
6. THE SUBGRADE MATERIAL AND SLURRY SHALL BE THOROUGHLY MIXED, BROUGHT TO THE PROPER MOISTURE CONTENT (+2) AND LEFT TO CURE USUALLY 3 DAYS (72 HRS.) MINIMUM AS APPROVED BY THE CITY ENGINEER.
7. DURING CURING, THE SUBGRADE SHALL BE REMIXED UNTIL PULVERIZATION REQUIREMENTS ARE MET, AS PER TxDOT.
8. PERCENT MINIMUM PASSING 1-3/4" SIEVE.....100
9. PERCENT MINIMUM PASSING 3/4" SIEVE.....85
10. PERCENT MINIMUM PASSING NO.4 SIEVE.....60
11. SLURRY TESTS SHALL BE CONDUCTED EVERY 150 LF ON ALTERNATING LANES OF TRAFFIC OR EVERY 300 LF ON SINGLE LANES AS REQUIRED. AT LEAST ONE TEST SHALL BE CONDUCTED ON EACH ROADWAY OR CUL-DE-SAC.
12. THE TREATED SUBGRADE SHALL BE KEPT MOIST AND PREVENTED FROM DRYING. IN THE EVENT OF A ONE-HALF (1/2) INCH RAINFALL AND/OR IF THE MATERIAL BECOMES DRY AND IS NOT IN COMPLIANCE WITH THE ±2% OPTIMUM MOISTURE, DENSITY AND MOISTURE TESTS SHALL BE RETAKEN.
13. LIME DEPTH DETERMINATIONS WILL BE CONDUCTED AT EACH LOCATION OF DENSITY TESTING. LIME-STABILIZED SUBGRADE SHALL BE A MINIMUM OF 6" AT 8" UNLESS OTHERWISE DIRECTED BY CITY ENGINEER. DENSITY TESTING SHALL BE DONE IMMEDIATELY PRIOR TO PLACEMENT OF REINFORCING STEEL, AND SHALL BE COMPACTED TO A MINIMUM OF 95% LIME DEPTH TESTS SHALL BE CONDUCTED AT EVERY 150 LF OF ROADWAY ON ALTERNATING LANES OR EVERY 300 LF OF SINGLE LANE. AT LEAST ONE TEST SHALL BE CONDUCTED ON EACH ROADWAY AND/OR CUL-DE-SAC.
14. NO SUBGRADE SHALL BE COVERED WITH ANOTHER MATERIAL UNLESS APPROVED BY THE CITY OF SUGAR LAND AND LIME DEPTH TESTS HAVE BEEN COMPLETED.

LIME SUBGRADE:

1. LIME SHALL BE A "SLURRY" AS PER TxDOT 260 UNLESS SPECIFICALLY RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY ENGINEER.
2. 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, EIGHT INCHES (8") THICK THE INITIAL MIX TO REDUCE PLASTICITY INDEX (PI) TO 20 OR LESS AS DETERMINED BY THE LIME SERIES. THE FINAL MIX SHALL BE AT SIX INCHES (6") THICK.
4. LIME DRY SOLID CONTENT TESTS SHALL BE CONDUCTED ON SITE, ONCE PER ONE-HUNDRED (100) TONS OF MATERIAL DISTRIBUTED, UNLESS OTHERWISE NOTED.
5. THE SUBGRADE SHALL BE SHAPEL AND GRADED TO CONFORM TO THE TYPICAL SECTIONS, AS SHOWN ON THE PLANS, PRIOR TO TREATING THE EXISTING MATERIAL.
6. UNLESS APPROVED BY THE CITY ENGINEER, LIME OPERATIONS SHALL NOT BE STARTED WHEN THE AMBIENT AIR TEMPERATURE IS BELOW 40°F AND FALLING. LIME MAY, WITH APPROVAL, BE STARTED WHEN THE AMBIENT AIR TEMPERATURE IS 30°F AND RISING. LIME SHALL NOT BE PLACED WHEN WEATHER CONDITIONS, IN THE ENGINEER'S OPINION, ARE UNSUITABLE.
7. THE SUBGRADE MATERIAL AND SLURRY SHALL BE THOROUGHLY MIXED, BROUGHT TO THE PROPER MOISTURE CONTENT (+2) AND LEFT TO CURE USUALLY 3 DAYS (72 HRS.) MINIMUM AS APPROVED BY THE CITY ENGINEER.
8. DURING CURING, THE SUBGRADE SHALL BE REMIXED UNTIL PULVERIZATION REQUIREMENTS ARE MET, AS PER TxDOT.
9. PERCENT MINIMUM PASSING 1-3/4" SIEVE.....100
10. PERCENT MINIMUM PASSING 3/4" SIEVE.....85
11. PERCENT MINIMUM PASSING NO.4 SIEVE.....60
12. SLURRY TESTS SHALL BE CONDUCTED EVERY 150 LF ON ALTERNATING LANES OF TRAFFIC OR EVERY 300 LF ON SINGLE LANES AS REQUIRED. AT LEAST ONE TEST SHALL BE CONDUCTED ON EACH ROADWAY OR CUL-DE-SAC.
13. THE TREATED SUBGRADE SHALL BE KEPT MOIST AND PREVENTED FROM DRYING. IN THE EVENT OF A ONE-HALF (1/2) INCH RAINFALL AND/OR IF THE MATERIAL BECOMES DRY AND IS NOT IN COMPLIANCE WITH THE ±2% OPTIMUM MOISTURE, DENSITY AND MOISTURE TESTS SHALL BE RETAKEN.
14. LIME DEPTH DETERMINATIONS WILL BE CONDUCTED AT EACH LOCATION OF DENSITY TESTING. LIME-STABILIZED SUBGRADE SHALL BE A MINIMUM OF 6" AT 8" UNLESS OTHERWISE DIRECTED BY CITY ENGINEER. DENSITY TESTING SHALL BE DONE IMMEDIATELY PRIOR TO PLACEMENT OF REINFORCING STEEL, AND SHALL BE COMPACTED TO A MINIMUM OF 95% LIME DEPTH TESTS SHALL BE CONDUCTED AT EVERY 150 LF OF ROADWAY ON ALTERNATING LANES OR EVERY 300 LF OF SINGLE LANE. AT LEAST ONE TEST SHALL BE CONDUCTED ON EACH ROADWAY AND/OR CUL-DE-SAC.
15. NO SUBGRADE SHALL BE COVERED WITH ANOTHER MATERIAL UNLESS APPROVED BY THE CITY OF SUGAR LAND AND LIME DEPTH TESTS HAVE BEEN COMPLETED.

HOT MIX ASPHALTIC BASE COURSE:

1. NO HOT MIX ASPHALTIC BASE MAY BE INSTALLED UNTIL THE SUBGRADE HAS BEEN PROPERLY PREPARED AND TESTED AS PER THE PLANS AND SPECIFICATIONS. THE SUBGRADE SHALL BE INSPECTED AND APPROVED BY THE CITY OF SUGAR LAND BEFORE ANY BASE MATERIALS ARE INSTALLED.
2. HOT MIX ASPHALTIC BASE MATERIALS, HANDLING, AND INSTALLATION SHALL COMPLY WITH TxDOT STANDARDS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES 1995 (SECTION 027.11) AND ITS LATEST REVISIONS.
3. HOT MIX ASPHALTIC MATERIALS SHALL BE AT TEMPERATURES BETWEEN 250°F AND 325°F, WHEN PLACED.
4. MATERIALS MAY NOT BE PLACED IN WET CONDITIONS OR IF THE AMBIENT TEMPERATURE IS BELOW 50°F AND FALLING. MATERIALS MAY BE INSTALLED IF THE AMBIENT TEMPERATURE IS TAKEN IN THE SHADE AND IS 40°F AND RISING.
5. PLACE BASE COURSES 4 INCHES OR GREATER IN THICKNESS IN TWO OR MORE LAYERS, EACH HAVING A COMPACTED THICKNESS OF NOT GREATER THAN 4 INCHES.
6. BASE MATERIAL MAY ONLY BE PLACED AGAINST CLEAN, STRAIGHT EDGES, SAW CUTTINGS, FULL DEPTH, IS REQUIRED IF EXISTING EDGES ARE ROUGH OR UNEVEN.
7. COMPACTATION SHALL BEGIN WHILE MATERIAL IS STILL HOT AND AS SOON AS IT WILL BEAR THE ROLLER OR COMPACTOR WEIGHT WITHOUT UNDEE DISPLACEMENT OR HAIR CRACKING.
8. COMPACT SURFACE UNIFORMLY WITH ROLLERS OR TAMPERS IN LOCATIONS NOT READILY ACCESSIBLE (I.E., ALONG CURBS, WALLS, ETC.).
9. UNLESS OTHERWISE SPECIFIED, COMPACT DENSITY TO NOT LESS THAN 95% OF MAXIMUM POSSIBLE DENSITY.
10. A CERTIFIED LAB SHALL BE ON SITE AT ALL TIMES TO TEST AND PROPERLY DOCUMENT THE CONSTRUCTION METHODS AND QUALITY OF MATERIALS.
11. ALL MATERIALS AND WORKMANSHIP SHALL COMPLY TO A.S.T.M. ASPHALT INSTITUTE AND CITY OF SUGAR LAND REQUIREMENTS. FAILURE TO COMPLY WILL RESULT IN REJECTION OF SAID MATERIALS AND SUCH SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
12. DO NOT OPEN BASE TO TRAFFIC UNTIL IT CAN BE MAINTAINED IN GOOD CONDITION FOR PROPER DISTRIBUTION.
13. DENSITIES SHALL BE TAKEN AT A MINIMUM OF AT LEAST ONCE PER 300 LF OF DRIVE LANE OR ONCE PER 250 SQ. YD., WHICHEVER MAY APPLY AND SHALL BE STAGGERED RELATIVE TO TESTING SITES IN ADJUTING TRAFFIC LANES. FAILURE TO MEET MINIMUM REQUIREMENTS SHOULD RESULT IN THE REPLACEMENT OF SAID MATERIAL AT CONTRACTOR'S EXPENSE.

BENCHMARK:

**BENCHMARK PUBLISHED ELEVATION - 70.14'**  
CITY OF SUGAR LAND REFERENCE MARK NUMBER  
SGR-1, BEING A BRASS DISK STAMPED "RM 001"  
LOCATED ON A MEDIAN ON ELKINS RD APPROX.  
2.15 MILES SOUTH OF WILLIAMS TRACE BLVD.  
ELEV. 70.14', NAVD88, 2001 ADJUSTMENT.

**TEMPORARY BENCHMARK "A" ELEVATION - 66.75'**  
BOX CUT ON A STORM INLET LOCATED ON THE  
EAST SIDE OF WEST AVAION DRIVE APPROX. 260  
FEET SOUTH OF UNIVERSITY BLVD. (AS SHOWN  
HEREON)

**TEMPORARY BENCHMARK "B" ELEVATION - 67.12'**  
BOX CUT ON A STORM INLET LOCATED ON THE  
SOUTH SIDE OF UNIVERSITY BLVD. APPROX. 180  
FEET EAST OF WEST AVAION DRIVE. (AS SHOWN  
HEREON)

RECORD DRAWING

I HEREBY CERTIFY THAT THIS DRAWING REFLECTS THE  
IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION,  
AND GRADE; AND THAT THE CONSTRUCTION WAS IN  
SUBSTANTIAL COMPLIANCE WITH THE CONTRACT  
DOCUMENTS.

CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: *[Signature]*  
DEVELOPMENT COORDINATOR

DATE: 8/16/17

DATE	REVISION	BY



CITY OF SUGARLAND, TEXAS  
ENGINEERING DEPARTMENT

FORT BEND, TEXAS

SHOPS IN RIVERSTONE

GENERAL NOTES  
1 OF 2

**LJA Engineering, Inc.**  
2829 Briarpark Drive Suite 600  
Houston, Texas 77042  
Phone 713.953.5200  
Fax 713.953.5026  
FRN - F-1386

LJA PROJECT NO.: 2423-1601P

DESIGNED BY: JRP  
DRAWN BY: JRP/MMB  
DATE: AUG 2017

SCALE: NTS  
SHEET NO. 2 OF 15

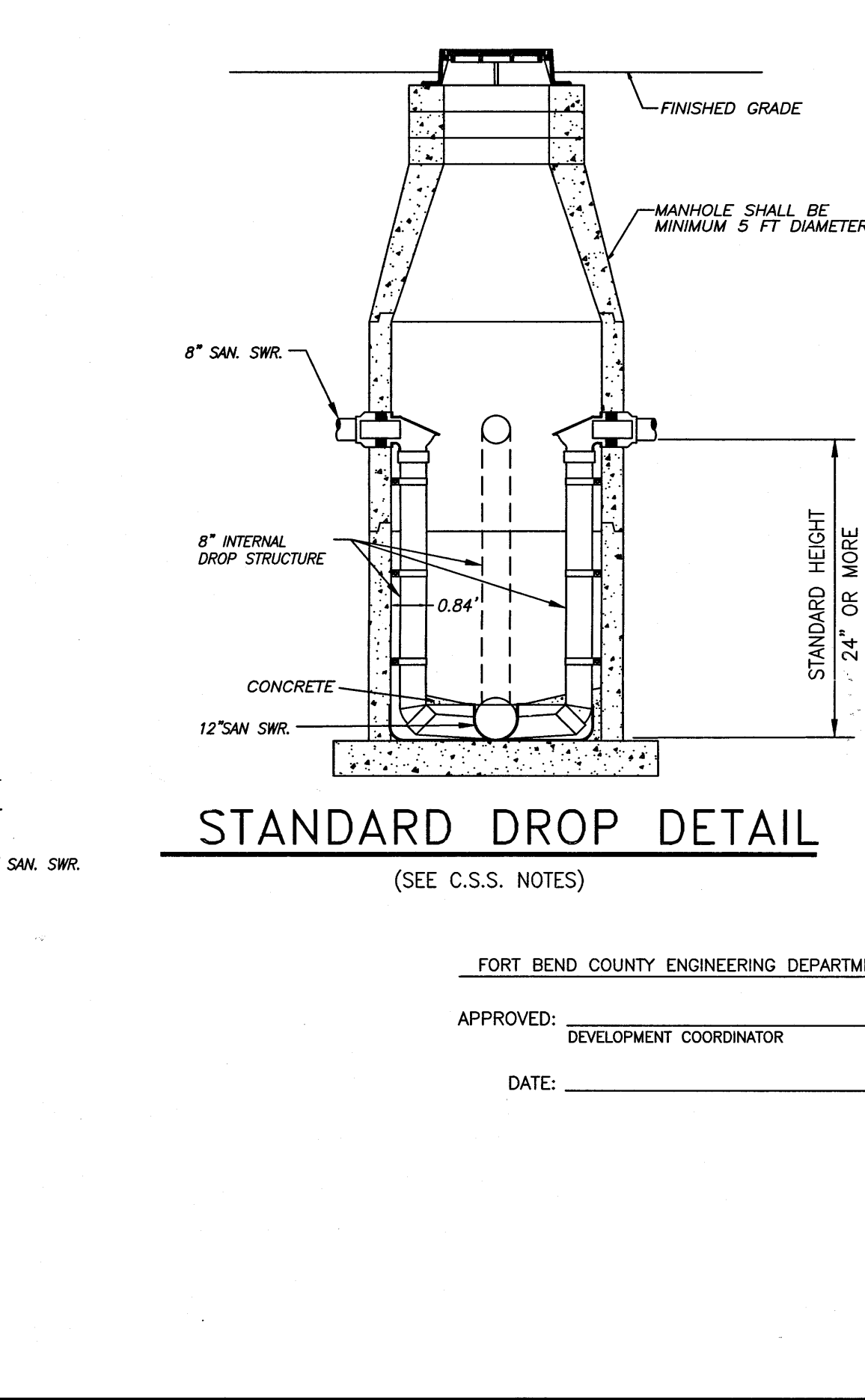
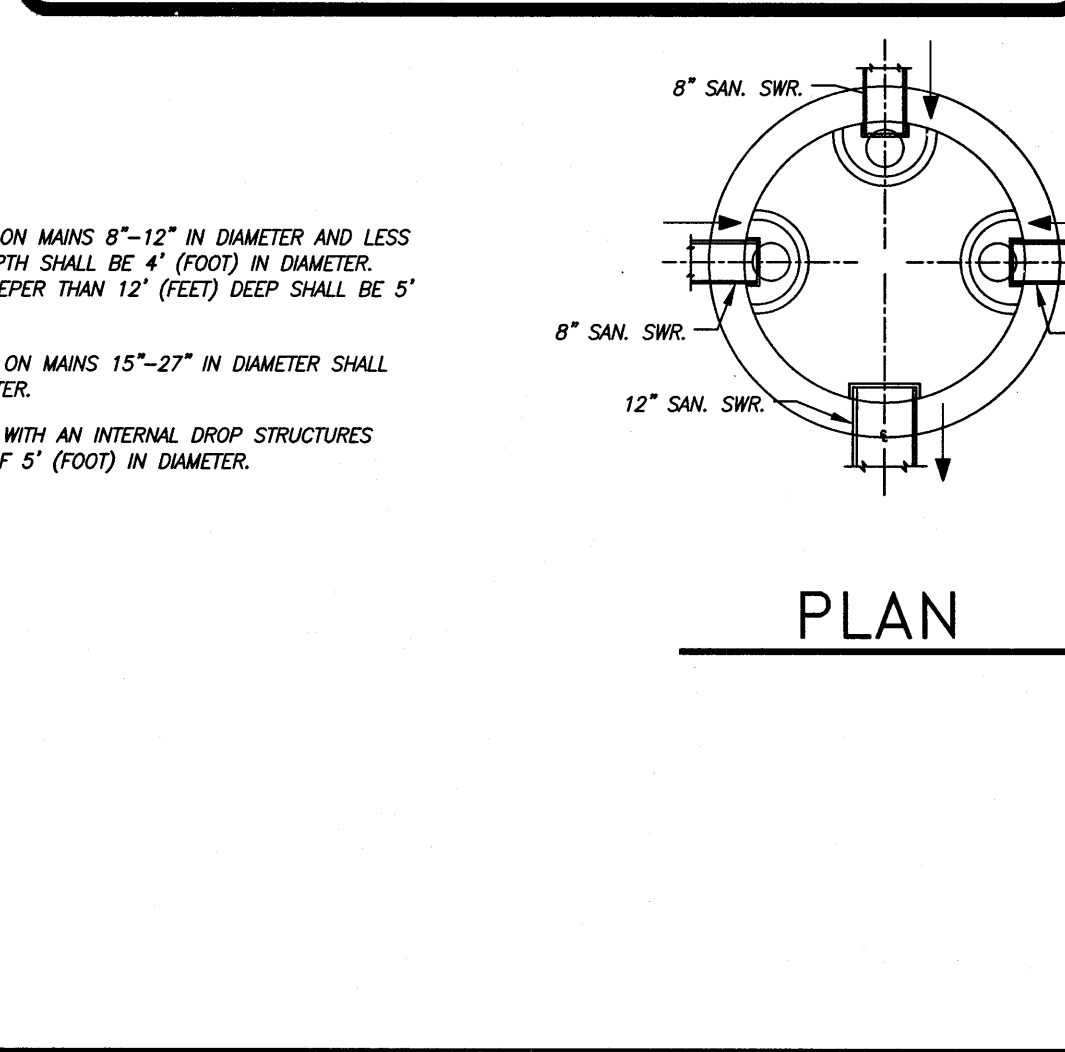
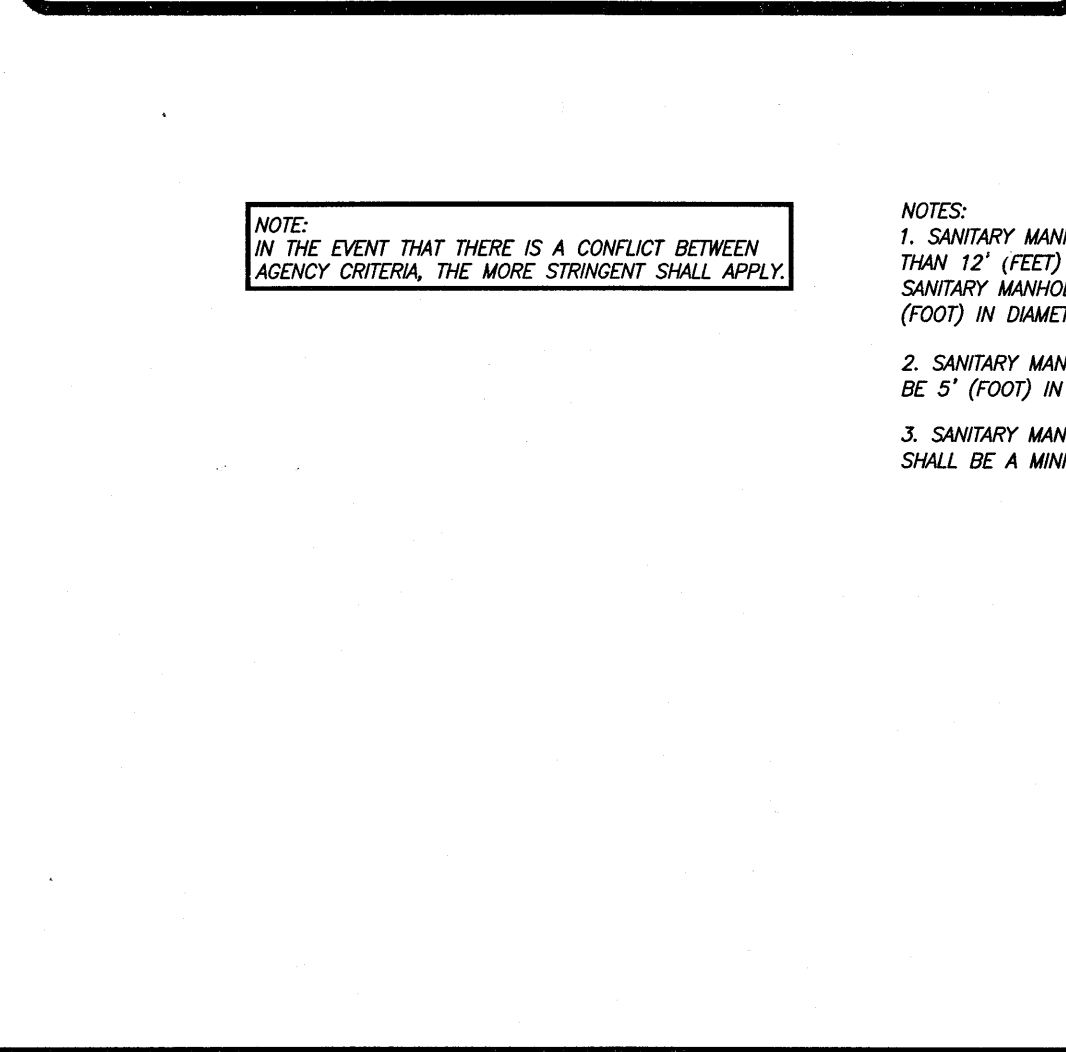
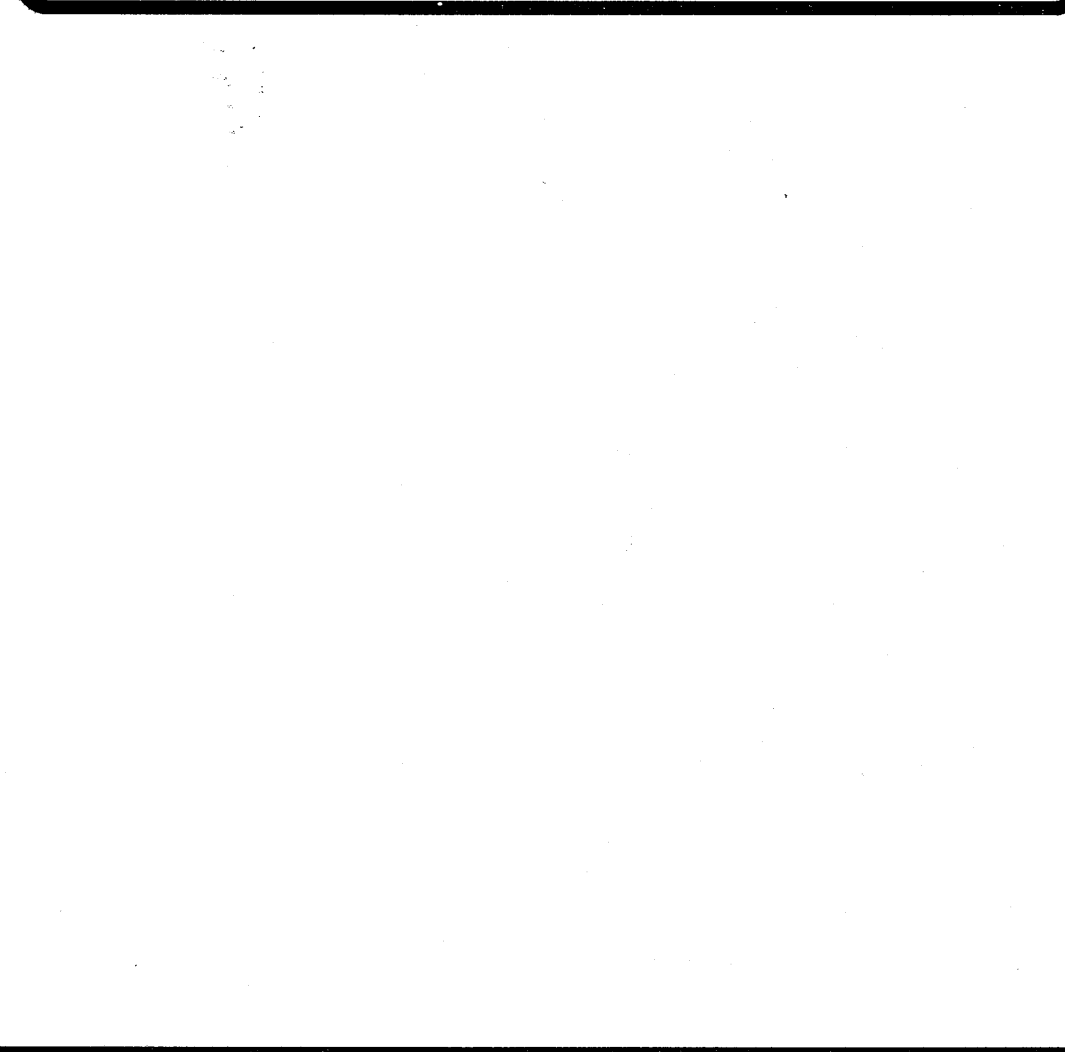


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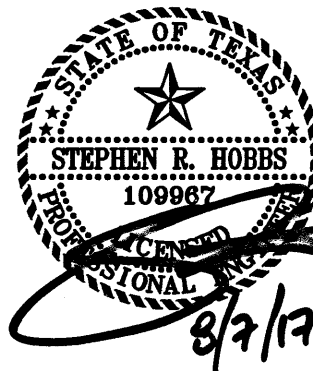




[illegible]

TEMPORARY BENCHMARK "B" ELEVATION - 67.12'  
BOX CUT ON A STORM INLET LOCATED ON THE  
SOUTH SIDE OF UNIVERSITY BLVD. APPROX. 180  
FEET EAST OF WEST AVALON DRIVE. (AS SHOWN  
HEREON)

SCALE:	
HORIZ:	SHEET NO. 4 OF 15
VERT:	





HYPER-CHLORINATED WATER NOTES

1. HYPER-CHLORINATED WATER SHALL NOT BE DISCHARGED TO THE STORM SEWER OR DRAINAGE SYSTEM UNLESS THE CHLORINE CONCENTRATION IS REDUCED TO 4 PPM OR LESS BY CHEMICALLY TREATING THE DECHLORINATE OR BY ONSITE RETENTION UNTIL NATURAL ATTENUATION OCCURS.
2. DISCHARGE OF HIGH FLOW RATE AND VELOCITIES SHALL BE DIRECTED TO VELOCITY DISSIPATION DEVICES.
3. CHLORINE CAN BURN VEGETATION, SO IT SHOULD NOT BE USED TO WATER VEGETATION THAT IS BEING USED FOR STABILIZATION, VEGETATED FILTERS OR BUFFERS, OR OTHER VEGETATION TO BE PRESERVED.
4. HYPER-CHLORINATED WATER MAY BE DISCHARGED TO AN ONSITE RETENTION AREA UNTIL NATURAL ATTENUATION OCCURS. THE AREA MAY BE A DRY STORMWATER RETENTION BASIN, OR A PORTION OF THE SITE MAY BE GRADED TO FORM A TEMPORARY PIT OR BERMED AREA.
5. NATURAL ATTENUATION OF THE CHLORINE MAY BE AIDED BY AERATION. AIR CAN BE ADDED TO THE WATER BY DIRECTING THE DISCHARGE OVER A ROUGH SURFACE BEFORE IT ENTERS THE TEMPORARY RETENTION AREA OR AN AERATION DEVICE CAN BE PLACED IN THE RETENTION AREA.
6. ONSITE DISCHARGE MAY REQUIRE SEVERAL HOURS TO A FEW DAYS BEFORE THE WATER IS SAFE TO DISCHARGE. THE RATE AT WHICH CHLORINE WILL ATTENUATE IS AFFECTED BY SOIL CONDITIONS AND WEATHER CONDITIONS. ATTENUATION WILL OCCUR QUICKEST DURING WARM, SUNNY, AND DRY PERIODS.

SANITARY WASTE NOTES

1. THE CONTRACTOR SHALL PROVIDE AN APPROPRIATE NUMBER OF PORTABLE TOILETS BASED ON THE NUMBER OF EMPLOYEES USING THE TOILETS AND THE HOURS THEY WILL WORK.
2. SANITARY FACILITIES SHALL BE PLACED ON A MINIMUM OF 50 FEET AWAY FROM STORM DRAIN INLETS, CONVEYANCE CHANNELS OR SURFACE WATERS. IF UNABLE TO MEET THE 50 FOOT REQUIREMENT DUE TO SITE CONFIGURATION, PORTABLE TOILETS SHALL BE A MINIMUM OF 20 FEET AWAY FROM STORM DRAIN INLETS, CONVEYANCE CHANNELS OR SURFACE WATER AND SECONDARY CONTAINMENT SHALL BE PROVIDED IN CASE OF SPILLS.
3. THE LOCATION OF THE PORTABLE TOILETS SHALL BE ACCESSIBLE TO MAINTENANCE TRUCKS WITHOUT DAMAGING EROSION AND SEDIMENT CONTROLS OR CAUSING EROSION OR TRACKING PROBLEMS.
4. SANITARY FACILITIES SHALL BE FULLY ENCLOSED AND DESIGNED IN A MANNER THAT MINIMIZES THE EXPOSURE OF SANITARY WASTE TO PRECIPITATION AND STORMWATER RUNOFF.
5. WHEN HIGH WINDS ARE EXPECTED, PORTABLE TOILETS SHALL BE ANCHORED OR OTHERWISE SECURED TO PREVENT THEM FROM BEING BLOWN OVER.
6. THE COMPANY THAT SUPPLIES AND MAINTAINS THE PORTABLE TOILETS SHALL BE NOTIFIED IMMEDIATELY IF A TOILET IS TIPPED OVER OR DAMAGED IN A WAY THAT THE RESULTS IN A DISCHARGE. DISCHARGED SOLID MATTER SHALL BE VACUUMED INTO A SEPTIC TRUCK BY THE COMPANY THAT MAINTAINS THE TOILETS.
7. THE OPERATOR OF THE MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) SHALL BE NOTIFIED IF A DISCHARGE FROM THE PORTABLE TOILETS ENTERS THE MS4 OR A NATURAL CHANNEL.
8. SANITARY FACILITIES SHALL NOT BE PERMITTED ON PUBLIC SIDEWALKS, STREETS OR INLETS.

DEBRIS AND TRASH NOTES

1. ALL WASTE SOURCES AND STORAGE AREAS SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS AND OTHER WATERS, IF THE SITE CONFIGURATION PROVIDES SUFFICIENT SPACE TO DO SO. IN NO CASE SHALL MATERIAL AND WASTE SOURCES BE CLOSER THAN 20 FEET FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS, AND OTHER WATERS.
2. CONSTRUCTION WASTE AND TRASH SHALL BE STORED IN A MANNER THAT MINIMIZES ITS EXPOSURE TO PRECIPITATION AND STORMWATER RUNOFF.
3. WHENEVER POSSIBLE, MINIMIZE PRODUCTION OF DEBRIS AND TRASH.
4. INSTRUCT CONSTRUCTION WORKERS IN PROPER DEBRIS AND TRASH STORAGE AND HANDLING PROCEDURES.
5. SEGREGATE POTENTIAL HAZARDOUS WASTE FROM NON-HAZARDOUS CONSTRUCTION SITE DEBRIS.
6. PROHIBIT LITTERING BY WORKERS AND VISITORS.
7. POLICE SITE DAILY FOR LITTER AND DEBRIS.
8. ENFORCE SOLID WASTE HANDLING AND STORAGE PROCEDURES.
9. IF FEASIBLE, RECYCLE CONSTRUCTION AND DEMOLITION DEBRIS SUCH AS WOOD, METAL, AND CONCRETE.
10. TRASH AND DEBRIS SHALL BE REMOVED FROM THE SITE AT REGULAR INTERVALS THAT ARE SCHEDULED TO EMPTY CONTAINERS WHEN THEY ARE 90 PERCENT FULL OR MORE FREQUENTLY.
11. GENERAL CONSTRUCTION DEBRIS MAY BE HAULED TO A LICENSED CONSTRUCTION DEBRIS LANDFILL.
12. USE WASTE AND RECYCLING HAULERS/FACILITIES APPROVED BY THE LOCAL MUNICIPALITY.
13. CHIPPING OF TREES AND BRUSH FOR USE SUCH AS MULCH IS PREFERRED ALTERNATIVE TO OFFSITE DISPOSAL.
14. NO WASTE, TRASH, OR DEBRIS SHALL BE BURIED, BURNED OR OTHER WISE DISPOSED OF ONSITE.
15. CLEARLY MARK ON ALL DEBRIS AND TRASH CONTAINERS WHICH MATERIALS ARE ACCEPTABLE. FOREMAN AND/OR CONSTRUCTION SUPERVISOR SHALL MONITOR ONSITE SOLID WASTE STORAGE AND DISPOSAL PROCEDURES DAILY.

CONCRETE SAWCUTTING WASTE NOTES

1. DURING SAWCUTTING OPERATIONS, THE SLURRY AND CUTTINGS SHALL BE CONTINUOUSLY VACUUMED OR OTHERWISE RECOVERED AND NOT BE ALLOWED TO DISCHARGE FROM THE SITE.
2. IF THE PAVEMENT TO BE CUT IS NEAR A STORM DRAIN INLET, THE INLET SHALL BE BLOCKED BY SANDBAGS OR EQUIVALENT TEMPORARY MEASURES TO PREVENT THE SLURRY FROM ENTERING THE INLET. REMOVE THE SANDBAGS IMMEDIATELY AFTER COMPLETING SAWCUTTING OPERATIONS, SO THEY DO NOT CAUSE DRAINAGE PROBLEMS DURING STORM EVENTS.
3. SLURRY AND CUTTINGS SHALL NOT BE ALLOWED TO REMAIN ON THE PAVEMENT TO DRY OUT.
4. DEVELOP PRE-DETERMINED, SAFE SLURRY DISPOSAL AREAS.
5. COLLECTED SLURRY AND CUTTINGS SHOULD BE IMMEDIATELY HAULED FROM THE SITE FOR DISPOSAL AT A WASTE FACILITY. IF THIS IS NOT POSSIBLE, THE SLURRY AND CUTTINGS SHALL BE DISCHARGED INTO ONSITE CONTAINMENT.
6. THE ONSITE CONTAINMENT MAY BE EXCAVATED OR BERMED PIT LINED WITH PLASTIC MINIMUM OF 10 MILLIMETERS THICK. IF THE PROJECT INCLUDES PLACEMENT OF NEW CONCRETE, SLURRY FROM SAWCUTTING MAY BE DISPOSED OF IN FACILITIES DESIGNATED FOR THE WASHOUT OF CONCRETE TRUCKS INSTEAD OF CONSTRUCTING A SEPARATE CONTAINMENT.
7. THE CONTAINMENT SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS, AND OTHER WATERS, IF THE SITE CONFIGURATION PROVIDES SUFFICIENT SPACE TO DO SO. IN NO CASE SHALL THE COLLECTION AREA BE CLOSER THAN 20 FEET FROM INLETS, SWALES, DRAINAGE WAYS, CHANNELS AND OTHER WATERS.
8. SEVERAL, PORTABLE, PRE-FABRICATED, CONCRETE WASHOUT, COLLECTION BASINS ARE COMMERCIALLY AVAILABLE AND ARE AN ACCEPTABLE ALTERNATIVE TO AN ONSITE CONTAINMENT PIT.
9. REMOVE WASTER CONCRETE WHEN THE CONTAINMENT IS HALF FULL. ALWAYS MAINTAIN A MINIMUM OF ONE FOOT FREEBOARD.
10. ONSITE EVAPORATION OF SLURRY WATER AND RECYCLING OF THE CONCRETE WASTE IS THE PREFERRED DISPOSAL METHOD. WHEN THIS IS NOT FEASIBLE, DISCHARGE FROM THE COLLECTION AREA SHALL ONLY BE ALLOWED IF A PASSIVE TREATMENT SYSTEM IS USED TO REMOVE THE FINES. MECHANICAL MIXING IS REQUIRED IN THE COLLECTION AREA. THE PH MUST BE TESTED, AND DISCHARGED IS ALLOWED IN IF THE PH DOES NOT EXCEED 8.0. THE PH MAY BE LOWERED BY ADDING SULFURIC ACID TO THE SLURRY WATER.
11. CARE SHALL BE EXERCISED WHEN TREATING THE SLURRY WATER FOR DISCHARGE. MONITORING MUST BE IMPLEMENTED TO VERIFY THAT DISCHARGES FROM THE COLLECTION AREA DO NOT VIOLATE GROUNDWATER OR SURFACE WATER QUALITY STANDARDS.
12. GEOTEXTILE FABRICS SUCH AS THOSE USED FOR SILT FENCE SHOULD NOT BE USED TO CONTROL SAWCUTTING WASTE, SINCE THE GRAIN SIZE IS SIGNIFICANTLY SMALLER THAN THE APPARENT OPENING SIZE OF THE FABRIC.

SPILL AND LEAK RESPONSE NOTES

1. RECORDS OF RELEASES THAT EXCEED THE REPORTABLE QUANTITY (RQ) FOR OIL AND HAZARDOUS SUBSTANCES SHOULD BE MAINTAINED IN ACCORDANCE WITH THE FEDERAL AND STATE REGULATIONS.
2. EMERGENCY CONTACT INFORMATION AND SPILL RESPONSE PROCEDURES SHALL BE POSTED IN A READILY AVAILABLE REA FOR ACCESS BY ALL EMPLOYEES AND SUBCONTRACTORS.
3. SPILL CONTAINMENT KITS SHOULD BE MAINTAINED FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS THAT ARE REGULARLY ONSITE. MATERIALS IN KITS SHOULD BE BASED ON CONTAINMENT GUIDELINES IN THE MATERIALS SAFETY AND DATA SHEETS (MSDS) FOR THE SUBSTANCE MOST FREQUENTLY ONSITE.
4. SPILL KITS ARE INTENDED FOR RESPONSE TO SMALL SPILLS, TYPICALLY LESS THAN 5 GALLONS, OF SUBSTANCES THAT ARE NOT EXTREMELY HAZARDOUS.
5. SIGNIFICANT SPILLS OR OTHER RELEASES WARRANT IMMEDIATE RESPONSE BY TRAINED PROFESSIONALS.
6. SUSPECTED JOB-SITE CONTAMINATION SHOULD BE IMMEDIATELY REPORTED TO REGULATORY AUTHORITIES AND PROTECTIVE ACTIONS TAKEN.
7. THE CONTRACTOR SHOULD BE REQUIRED TO DESIGNATE A SITE SUPERINTENDENT, FOREMAN, SAFETY OFFICER, OR OTHER SENIOR PERSON WHO IS ONSITE DAILY TO BE THE SPILL AND LEAK RESPONSE COORDINATOR (SLRC) AND MUST HAVE KNOWLEDGE OF AND BE TRAINED IN CORRECT SPILL AND LEAK RESPONSE PROCEDURES.

SUBGRADE STABILIZATION NOTES

1. MINIMIZE THE DISCHARGE OF THE CHEMICAL STABILIZERS BY THE CONTRACTOR LIMITING THE AMOUNT OF STABILIZING AGENT ONSITE TO THAT WHICH CAN BE THOROUGHLY MIXED AND COMPACTED BY THE END OF EACH WORKDAY.
2. STABILIZERS SHALL BE APPLIED AT RATES THAT RESULT IN NO RUN OFF.
3. STABILIZATION SHALL NOT OCCUR IMMEDIATELY BEFORE AND DURING RAINFALL EVENTS.
4. NO TRAFFIC OTHER THAN WATER TRUCKS AND MIXING EQUIPMENT SHALL BE ALLOWED TO PASS OVER THE AREA BEING STABILIZED UNTIL AFTER COMPLETION OF MIXING THE CHEMICAL.
5. AREA ADJACENT AND DOWNSTREAM OF STABILIZED AREAS SHALL BE ROUGHENED TO INTERCEPT CHEMICAL RUNOFF AND REDUCE RUNOFF VELOCITY.
6. GEOTEXTILE FABRICS SUCH AS THOSE USED FOR SILT FENCE SHOULD NOT BE USED TO TREAT CHEMICAL RUNOFF, BECAUSE THE CHEMICALS ARE DISSOLVED IN THE WATER AND WON'T BE AFFECTED BY A BARRIER AND THE SUSPENDED SOLIDS ARE SIGNIFICANTLY SMALLER THAN THE APPARENT OPENING SIZE OF THE FABRIC.
7. IF SOIL STABILIZERS ARE STORED ONSITE, THEY SHALL BE CONSIDERED HAZARDOUS MATERIAL AND SHALL BE MANAGED ACCORDING TO THE CRITERIA OF CHEMICAL MANAGEMENT TO CAPTURE ANY ACCIDENTAL LIME OR CHEMICAL OVERFLOW.
8. THE CONTRACTOR SHALL INSTALL BMP'S TO ALL INLETS AND OPENINGS CONNECTED TO THE STORM SEWER SYSTEMS TO PREVENT LIME FROM ENTERING THE MS4 SYSTEM.

SANDBLASTING WASTE NOTES

1. THE CONTRACTOR SHOULD BE REQUIRED TO DESIGNATE THE SITE SUPERINTENDENT, FOREMAN, OR OTHER PERSON WHO IS RESPONSIBLE FOR SANDBLASTING TO ALSO BE RESPONSIBLE FOR SANDBLASTING WASTE MANAGEMENT.
2. PROHIBIT THE DISCHARGE OF SANDBLASTING WASTE.
3. USE ONLY INERT, NON-DEGRADABLE SANDBLAST MEDIA.
4. USE APPROPRIATE EQUIPMENT FOR THE JOB; DO NOT OVER-BLAST.
5. WHENEVER POSSIBLE, BLAST IN A DOWNWARD DIRECTION.
6. CEASE BLASTING ACTIVITIES IN HIGH WINDS OR IF WIND DIRECTION COULD TRANSPORT GRIT TO DRAINAGE FACILITIES.
7. INSTALL DUST SHIELDING AROUND SANDBLASTING AREAS.
8. COLLECT AND DISPOSE OF ALL SPENT SANDBLAST GRIT. USE DUST CONTAINMENT FABRICS AND DUST COLLECTION HOPPERS AND BARRELS.
9. NON-HAZARDOUS SANDBLAST GRIT MAY BE DISPOSED IN PERMITTED CONSTRUCTION DEBRIS LANDFILLS OR PERMITTED SANITARY LANDFILLS.
10. IF SANDBLAST MEDIA CANNOT BE FULLY CONTAINED, CONSTRUCT SEDIMENT TRAPS DOWNSTREAM FROM BLASTING AREA WHERE APPROPRIATE.
11. USE SAND FENCING WHERE APPROPRIATE IN AREAS WHERE BLAST MEDIA CANNOT BE FULLY CONTAINED.
12. IF NECESSARY, INSTALL MISTING EQUIPMENT TO REMOVE SANDBLAST GRIT FROM THE AIR PREVENT RUNOFF FROM MISTING OPERATIONS FROM ENTERING DRAINAGE SYSTEMS.
13. USE VACUUM GRIT COLLECTION SYSTEMS WHERE POSSIBLE.
14. KEEP RECORDS OF SANDBLASTING MATERIALS, PROCEDURES, AND WEATHER CONDITIONS ON A DAILY BASIS.
15. TAKE ALL REASONABLE PRECAUTIONS TO ENSURE THAT SANDBLASTING GRIT IS CONTAINED AND KEPT AWAY FROM DRAINAGE STRUCTURES.
16. SAND BLASTING MEDIA SHOULD ALWAYS BE STORED UNDER COVER AWAY FROM DRAINAGE STRUCTURES.
17. ENSURE THAT STORED MEDIA OR GRIT IS NOT SUBJECTED TO TRANSPORT BY WIND.
18. ENSURE THAT ALL SANDBLASTING EQUIPMENT AND STORAGE CONTAINERS COMPLY WITH CURRENT LOCAL, STATE, AND FEDERAL REGULATIONS.
19. CAPTURE AND TREAT RUNOFF, WHICH COMES INTO CONTACT WITH SANDBLASTING MATERIALS OR WASTE.

BENCHMARK:

BENCHMARK PUBLISHED ELEVATION - 70.14'  
CITY OF SUGAR LAND REFERENCE MARK NUMBER  
SGR-1, BEING A BRASS DISK STAMPED "RM 001"  
LOCATED ON A MEDIAN ON ELKINS RD APPROX.  
2.15 MILES SOUTH OF WILLIAMS TRACE BLVD.  
ELEV. 70.14', NAVD88, 2001 ADJUSTMENT.

TEMPORARY BENCHMARK "A" ELEVATION - 66.75'  
BOX CUT ON A STORM INLET LOCATED ON THE  
EAST SIDE OF WEST AVALON DRIVE APPROX. 260  
FEET SOUTH OF UNIVERSITY BLVD. (AS SHOWN  
HEREON)

TEMPORARY BENCHMARK "B" ELEVATION - 67.12'  
BOX CUT ON A STORM INLET LOCATED ON THE  
SOUTH SIDE OF UNIVERSITY BLVD. APPROX. 180  
FEET EAST OF WEST AVALON DRIVE. (AS SHOWN  
HEREON)

RECORD DRAWING

I HEREBY CERTIFY THAT THIS DRAWING REFLECTS THE  
IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION,  
AND GRADE; AND THAT THE CONSTRUCTION WAS IN  
SUBSTANTIAL COMPLIANCE WITH THE CONTRACT  
DOCUMENTS.

CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: \_\_\_\_\_  
DEVELOPMENT COORDINATOR

DATE: 8/16/17

DATE	REVISION	BY



CITY OF SUGARLAND, TEXAS  
ENGINEERING DEPARTMENT

FORT BEND, TEXAS

SHOPS IN RIVERSTONE

EROSION CONTROL  
NOTES

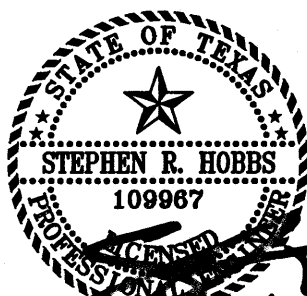
LJA Engineering, Inc.

2828 Briarpark Drive Phone 713.953.5200  
Suite 600 Fax 713.953.5026  
Houston, Texas 77042 FRN - F-1386

LJA PROJECT NO.: 2423-1601P

DESIGNED BY: JRP DRAWN BY: JRP/MMB DATE: AUG 2017

SCALE: \_\_\_\_\_ SHEET NO. 5 OF 15

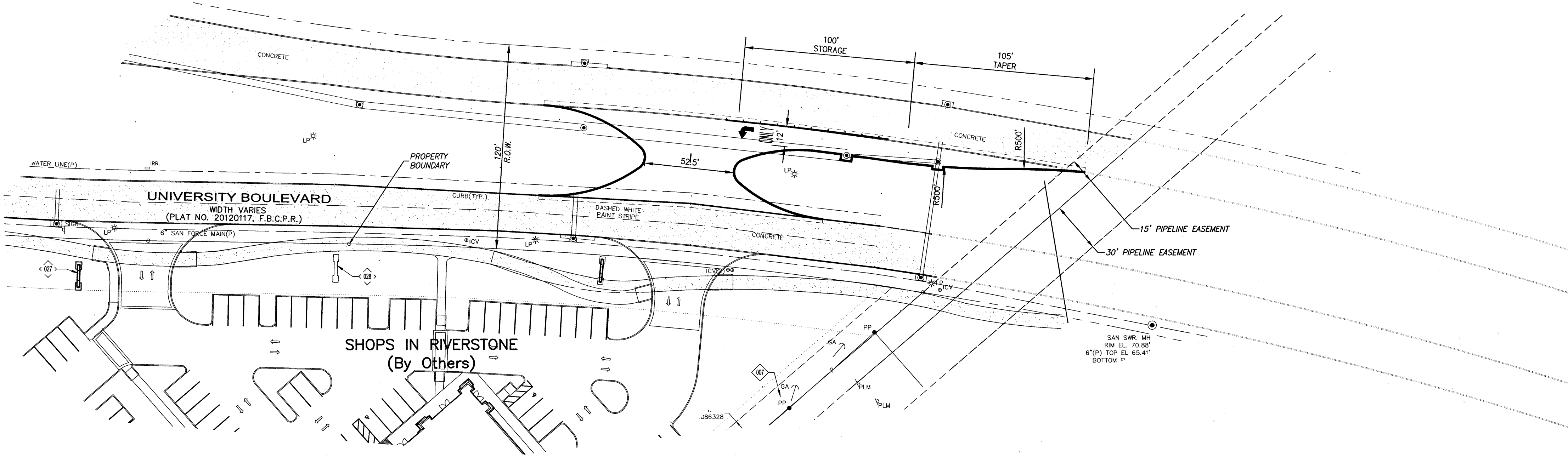


8/7/17

PLOT TIME:

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PLOT DATE:

CAUTION  
EXISTING GAS  
LINES

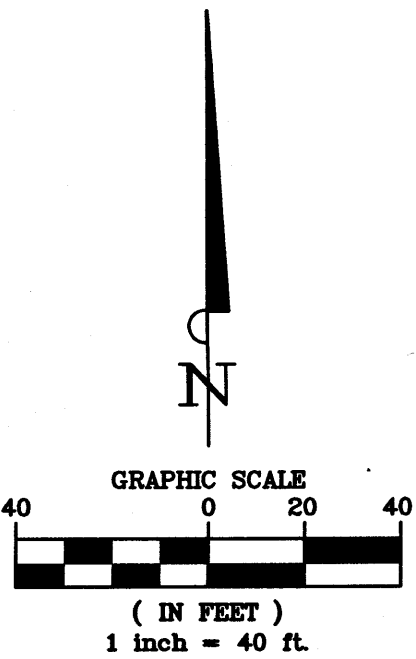


NOTES:

1. PERMIT REQUIRED PER ORD. NO. 1070 - SUBJECT TO A \$500 PER DAY, PER OFFENSE, FINE, SEC 21-16, CONSENT REQUIRED "IT IS UNLAWFUL FOR ANY PERSON TO DIG UP, BREAK UP, CUT, EXCAVATE, DRILL OR TUNNEL IN OR UPON ANY PUBLIC RIGHT OF WAY...WITHOUT FIRST OBTAINING A RIGHT OF WAY WORK/USE PERMIT."
2. A CITY OF SUGAR LAND RIGHT-OF-WAY USE/WORK PERMIT MUST BE OBTAINED PRIOR TO TAPPING PUBLIC UTILITIES, PLANTING LANDSCAPING OR ANY OTHER WORK PERFORMED IN THE ROAD RIGHT OF WAY. CONTACT CITY OF SUGAR LAND PUBLIC WORKS AT 281-275-2450 FOR PERMIT APPLICATION.
3. TAPPING SLEEVE USED FOR CONNECTION TO THE CITY MAIN SHALL BE STAINLESS STEEL FULL CIRCUMFERENCE GASKET, OR MECHANICAL JOINT, EPOXY COATED TAPPING SADDLE WITH "O" RING GASKET WILL NOT BE ALLOWED.
4. DOMESTIC AND IRRIGATION WATER SERVICE TAPS AND METERS 2" AND SMALLER TO BE INSTALLED BY THE CITY OF SUGAR LAND AFTER PAYMENT OF APPLICABLE FEES. CONTACT CITY OF SUGAR LAND TREASURY DEPARTMENT AT 281-275-2750 FOR FEE SCHEDULE.
5. INSTALLATION OF FIRE LINE SERVICE TAP AND BACKFLOW PREVENTION VAULT IS TO BE INSTALLED BY THE DEVELOPER/CONTRACTOR.
6. ALL FIRE HYDRANTS AND VALVES WITHIN THE PROJECT SITE SHALL BE ADJUSTED TO FINISHED GRADE PER CITY OF SUGAR LAND DESIGN STANDARDS.
7. ALL MANHOLE TOPS WITHIN THE PROJECT SITE SHALL BE ADJUSTED TO FINISHED GRADE PER CITY OF SUGAR LAND DESIGN STANDARDS.
8. ALL SANITARY SEWER SERVICE CONNECTION TO A MANHOLE MUST BE CORED AND SEALED WITH NON-SHRINK GROUT.
9. CONTACT THE CITY OF SUGAR LAND ENGINEERING DEPARTMENT (MIKE KRUSZYNZKI 281-275-2780) A MINIMUM OF 48-HOURS PRIOR TO CONSTRUCTION, INSTALLATIONS, OR MODIFICATIONS OF ANY PUBLIC INFRASTRUCTURE (WATER, SANITARY SEWER, STORM SEWER OR PAVEMENT).
10. THE REVIEW OF THE IRRIGATION PLAN AS A SUBMITTAL OF THE SITE PLAN DOES NOT CONSTITUTE THE APPROVAL OF A PERMIT FOR THE IRRIGATION PLAN. YOU MUST REQUEST FOR AN IRRIGATION PERMIT BY SUBMITTING A COMPLETE IRRIGATION PLAN LAYOUT TO THE CITY BUILDING DEPARTMENT FOR APPROVAL.

LEGEND

PROPOSED WATER LINE, G.V.&B. WITH FLUSHING VALVE	
EXISTING WATER LINE, G.V.&B. WITH FLUSHING VALVE	
PROPOSED SANITARY SEWER LINE & MANHOLE & CLEANOUT	
EXISTING SANITARY SEWER LINE & MANHOLE	
PROPOSED STORM SEWER LINE, TYPE C MH & INLETS	
EXISTING STORM SEWER LINE AND MANHOLE & INLETS	
EXISTING ELEVATIONS	
EXISTING ELECTRICAL UNDERGROUND CONDUIT	
EXISTING GAS LINE	
EXISTING UNDERGROUND TELEPHONE CABLE	
PROPOSED CATCH BASIN	
PROPOSED JUNCTION BOX	
CUMULATIVE FIXTURE UNITS	
BUILDING FIXTURE UNITS	
ONE JT. C900 P.V.C. CENTERED EACH WAY	
PROPOSED WATER METER	
PROPOSED BORE	
CLEAN OUT	
SHEET NUMBER REFERENCE	



BENCHMARK:

BENCHMARK PUBLISHED ELEVATION - 70.14'  
CITY OF SUGAR LAND REFERENCE MARK NUMBER SGR-1, BEING A BRASS DISK STAMPED "RM 001" LOCATED ON A MEDIAN ON ELKINS RD APPROX. 2.15 MILES SOUTH OF WILLIAMS TRACE BLVD. ELEV. 70.14', NAVD83, 2001 ADJUSTMENT.

TEMPORARY BENCHMARK "A" ELEVATION - 66.75'  
BOX CUT ON A STORM INLET LOCATED ON THE EAST SIDE OF WEST AVALON DRIVE APPROX. 260 FEET SOUTH OF UNIVERSITY BLVD. (AS SHOWN HEREON)

TEMPORARY BENCHMARK "B" ELEVATION - 67.12'  
BOX CUT ON A STORM INLET LOCATED ON THE SOUTH SIDE OF UNIVERSITY BLVD. APPROX. 180 FEET EAST OF WEST AVALON DRIVE. (AS SHOWN HEREON)

RECORD DRAWING

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CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_  
TITLE: \_\_\_\_\_

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED:   
DEVELOPMENT COORDINATOR  
DATE: 8/16/17

DATE	REVISION	BY



CITY OF SUGARLAND, TEXAS  
ENGINEERING DEPARTMENT

FORT BEND, TEXAS

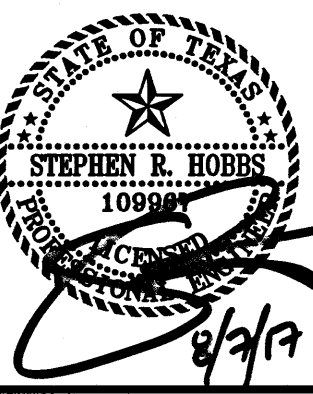
SHOPS IN RIVERSTONE

OVERALL SITE  
PLAN

LJA Engineering, Inc.   
2929 Briarpark Drive Suite 600 Houston, Texas 77042  
Phone 713.953.5200 Fax 713.953.5026 FRN - F-1386

LJA PROJECT NO.: 2423-1601P

DESIGNED BY: JRP	DRAWN BY: JRP/MMB	DATE: AUG 2017
SCALE: 1"=40'		SHEET NO. 6 OF 15



SHOPS IN RIVERSTONE - JOB NO. 2423-1601P



## NOTE:

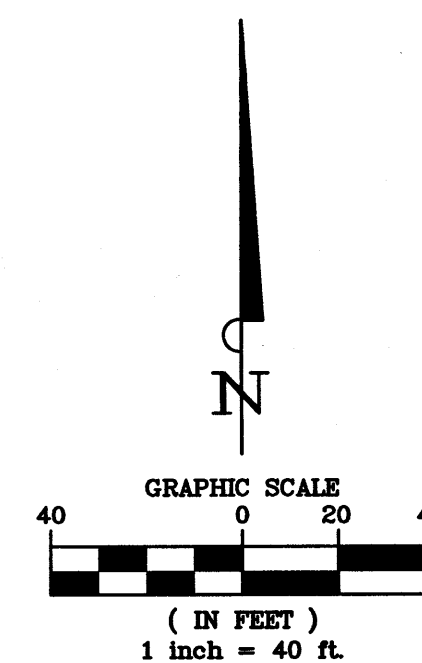
ALL PROPOSED ELEVATIONS NOTED ARE TO FINISHED PAVEMENT GRADE. FOR TOP OF CURB GRADE, WHERE APPLICABLE, ADD 6"

## GENERAL NOTES:

1. CONTRACTOR SHALL MAINTAIN SITE DRAINAGE AT ALL TIMES.
2. ALL MATERIALS FROM DEMOLITION/REMOVALS AS WELL AS EXCESS MATERIALS FROM THE EXCAVATIONS SHALL BECOME THE PROPERTY OF THE CONTRACTOR WHO SHALL DISPOSE OFF-SITE IN A LAWFUL MANNER.
3. GRADE PAVING UNIFORMLY BETWEEN INDICATED ELEVATIONS. ADJUST ELEVATIONS AS DIRECTED BY THE ENGINEER AND AS REQUIRED TO ACHIEVE POSITIVE DRAINAGE AND PLEASING APPEARANCE THROUGHOUT.
4. ADJUST STRUCTURES (JUNCTION BOXES, VALVE BOXES, PULL BOXES, ETC.) AS REQUIRED TO CONFORM TO NEW FINISHED GRADES.
5. PROPOSED PAVEMENT THICKNESS TO MATCH EXISTING PAVEMENT.

## GRADING NOTES:

1. CONTRACTOR TO SAWCUT FULL DEPTH AND REMOVE EXISTING CURB, PAVEMENT, AND LANDSCAPE. (CONTRACTOR TO KNOCK OFF EXISTING CURB WITHIN BRIDGE APPROACH INSTEAD OF SAWCUTTING.)
2. 8" WIDE SOLID WHITE STRIPE PER CITY OF SUGAR LAND STANDARDS DETAIL SL-28, SHEET 14.
3. CONTRACTOR TO INSTALL 6" CURB PER CITY OF SUGAR LAND STANDARDS DETAIL SL-23, SHEET 10.
4. CONTRACTOR TO MATCH ELEVATION AT EXISTING PAVEMENT.
5. ADJUST EXISTING STORM MANHOLE TO MATCH PROPOSED PAVEMENT.
6. TURNING ARROW SEE DETAIL SL-28, SHEET 14.
7. 4" SQ. 1-WAY REFLECTORIZED WHITE RAISED PAVEMENT MARKERS, TYPE I-C, SEE DETAIL SL-28, SHEET 14.
8. TXDOT R3-5L SIGN - LEFT TURN LANE.
9. CONTRACTOR TO VERIFY DEPTH OF CNP CONDUIT PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER IN WRITING.



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CITY OF SUGAR LAND REFERENCE MARK NUMBER SGR-1, BEING A BRASS DISK STAMPED "RM 001" LOCATED ON A MEDIAN ON ELKINS RD APPROX. 2.15 MILES SOUTH OF WILLIAMS TRACE BLVD. ELEV. 70.14', NAVD88, 2001 ADJUSTMENT.

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TEMPORARY BENCHMARK "B" ELEVATION - 67.12'  
BOX CUT ON A STORM INLET LOCATED ON THE SOUTH SIDE OF UNIVERSITY BLVD. APPROX. 180 FEET EAST OF WEST AVALON DRIVE. (AS SHOWN HEREON)

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CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: *[Signature]*  
DEVELOPMENT COORDINATOR

DATE: 8/16/17

DATE	REVISION	BY



CITY OF SUGARLAND, TEXAS  
ENGINEERING DEPARTMENT

FORT BEND, TEXAS

SHOPS IN RIVERSTONE

LEFT TURN LANE &  
MEDIAN OPENING

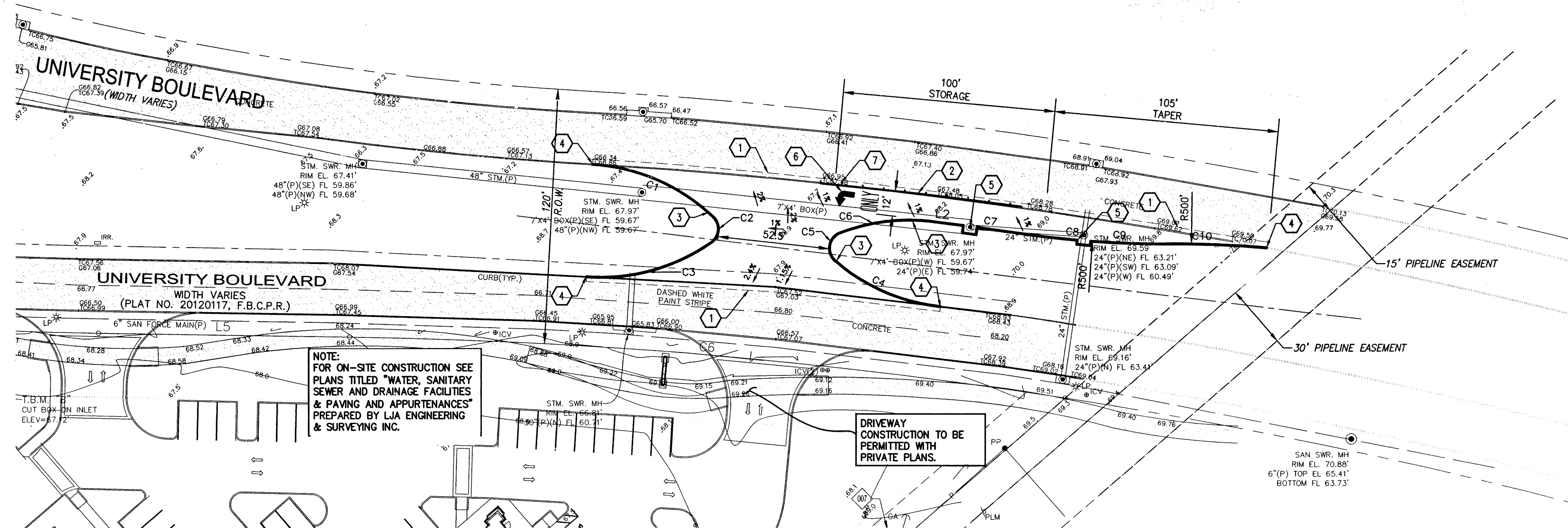
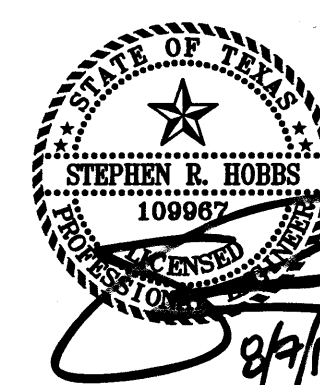
## LJA Engineering, Inc.

2929 Briarpark Drive Phone 713.953.5200  
Suite 600 Fax 713.953.5026  
Houston, Texas 77042 FRN - F-1386

LJA PROJECT NO.: 2423-1601P

DESIGNED BY: JRP DRAWN BY: JRP/MMB DATE: AUG 2017

SCALE: 1"=40'  
HORIZ: 1"=40' VERT: SHEET NO. 7 OF 15



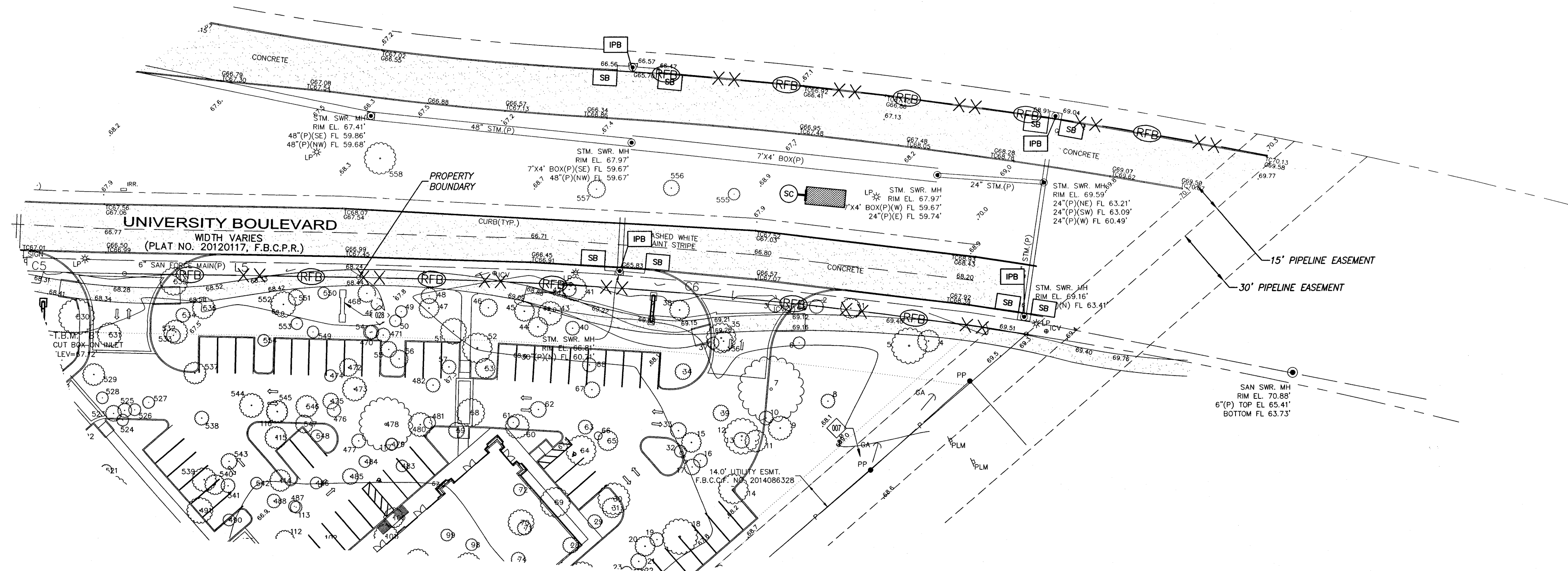
ONE-CALL NOTIFICATION SYSTEM  
CALL BEFORE YOU DIG!!  
(713) 223-4567 (IN HOUSTON)  
(NEW STATEWIDE NUMBER OUTSIDE HOUSTON)  
1-800-545-6005

CAUTION  
EXISTING GAS  
LINES

Curve Table			
Curve #	Length	Radius	Delta
C1	63.515	90.097	040.3912
C2	13.675	8.000	097.9435
C3	62.889	90.097	039.9936
C4	54.880	90.000	034.9377
C5	16.557	8.000	118.5758
C6	44.282	90.000	028.1909
C7	31.572	2607.809	000.6937
C8	16.523	500.000	001.8934
C9	31.473	500.000	003.6065
C10	51.762	500.000	005.9314

Line Table		
Line #	Length	Direction
L2	15.154	S82° 45' 46.96"E

SHOPS IN RIVERSTONE - JOB NO. 2423-1601P



NOTES:

1. FOR STORMWATER POLLUTION PREVENTION PLAN DETAILS, REF: SHEET C12.
2. FILTER FABRIC FENCE SHALL BE INSTALLED ON SITE AS INDICATED ON PLAN PRIOR TO CONSTRUCTION.

EROSION AND SEDIMENT CONTROLS

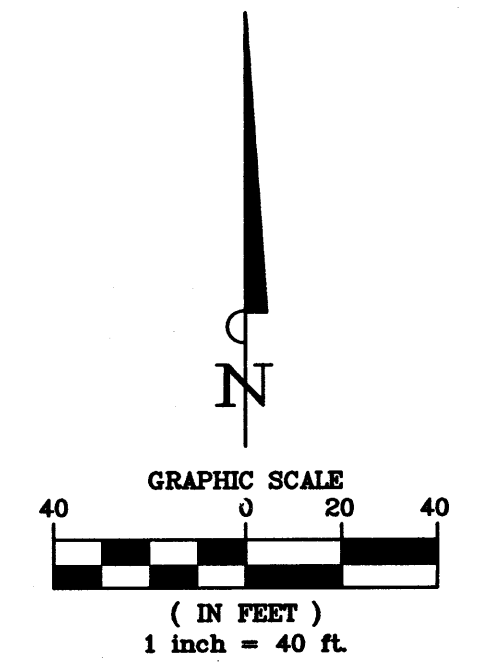
1. SEDIMENT WILL BE RETAINED ON SITE TO THE MAXIMUM EXTENT PRACTICABLE
2. CONTROL MEASURE WILL BE PROPERLY SELECTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND GOOD ENGINEERING PRACTICE. IF DAMAGED OR RENDERED INEFFECTIVE, THE EROSION AND SEDIMENT CONTROLS WILL BE REPAIRED OR REPLACED IMMEDIATELY.
3. WHEN PUMPING (DEWATERING) STANDING STORM WATER FROM THE SITE, THE OPERATOR SHALL USE APPROPRIATE BEST MANAGEMENT PRACTICES (BMPs) FROM THE STORM WATER MANAGEMENT HANDBOOK FOR CONSTRUCTION ACTIVITIES THAT ADDRESS DEWATERING ACTIVITIES. UNTREATED/DIRECT DISCHARGE INTO A STORM SEWER WILL NOT BE ALLOWED.
4. IF THE INTERM PERIOD BETWEEN CONSTRUCTION OF UTILITIES AND STREET CONSTRUCTION WILL BE MORE THAN 21 DAYS, THE STREET RIGHTS-OF-WAY WILL BE MULCHED OR OTHERWISE STABILIZED WITHIN 14 DAYS.
5. AFTER PAVING COMPLETION, NEWLY GRADED AREAS AND ALL EXPOSED SOILS WILL BE COMPLETELY STABILIZED.

MAINTENANCE

1. EROSION AND SEDIMENT CONTROL MEASURES THAT HAVE BEEN IMPROPERLY INSTALLED OR HAVE BEEN DISABLED, RUN-OVER, REMOVED OR OTHERWISE RENDERED INEFFECTIVE MUST BE REPLACED OR CORRECTED IMMEDIATELY.
2. MAINTENANCE AND REPAIRS WILL BE CONDUCTED WITHIN 24 HOURS OF INSPECTION REPORT.

LEGEND

- ROCK FILTER DAM ----- (RFD) (TYPE) (SYMBOL)
- STABILIZED CONSTRUCTION ACCESS ----- (SC) (SYMBOL)
- INLET PROTECTION BARRIER ----- (IPB) (SYMBOL)
- SAND BAG BERM ----- (SB) (SYMBOL)
- FILTER FABRIC FENCE ----- (FFB) (SYMBOL)



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TITLE: \_\_\_\_\_

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: *[Signature]*  
DEVELOPMENT COORDINATOR

DATE: 8/16/17

DATE	REVISION	BY



CITY OF SUGARLAND, TEXAS  
ENGINEERING DEPARTMENT

FORT BEND, TEXAS

SHOPS IN RIVERSTONE

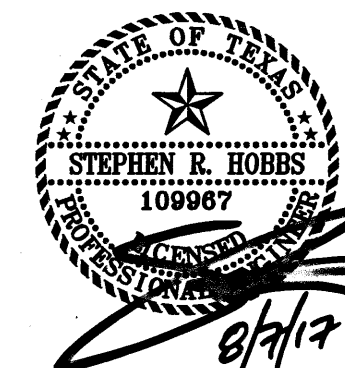
EROSION CONTROL  
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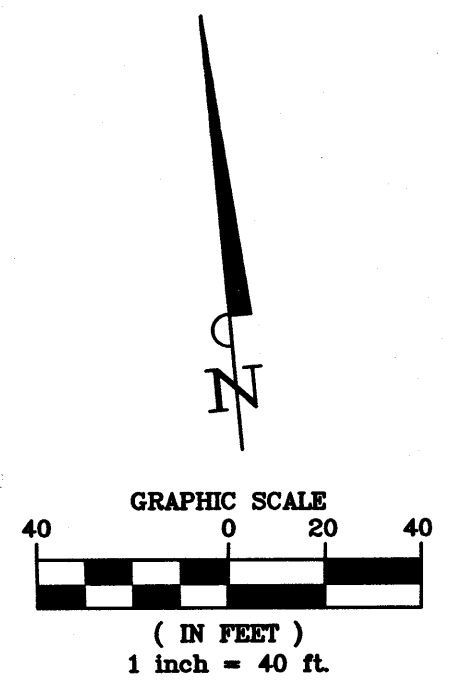
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DESIGNED BY: JRP DRAWN BY: JRP/MMB DATE: AUG 2017

SCALE: 1"=40'  
HORIZ: SHEET NO. 8 OF 15  
VERT: 1"=40'







**BENCHMARK:**  
BENCHMARK PUBLISHED ELEVATION - 70.14'  
CITY OF SUGAR LAND REFERENCE MARK NUMBER  
SGR-1, BEING A BRASS DISK STAMPED "RM 001"  
LOCATED ON A MEDIAN ON ELKINS RD APPROX.  
2.15 MILES SOUTH OF WILLIAMS TRACE BLVD.  
ELEV. 70.14', NAVD88, 2001 ADJUSTMENT.

TEMPORARY BENCHMARK "A" ELEVATION - 66.75'  
BOX CUT ON A STORM INLET LOCATED ON THE  
EAST SIDE OF WEST AVALON DRIVE APPROX. 260  
FEET SOUTH OF UNIVERSITY BLVD. (AS SHOWN  
HEREON)

TEMPORARY BENCHMARK "B" ELEVATION - 67.12'  
BOX CUT ON A STORM INLET LOCATED ON THE  
SOUTH SIDE OF UNIVERSITY BLVD. APPROX. 180  
FEET EAST OF WEST AVALON DRIVE. (AS SHOWN  
HEREON)

**RECORD DRAWING**  
I HEREBY CERTIFY THAT THIS DRAWING REFLECTS THE  
IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION,  
AND GRADE, AND THAT THE CONSTRUCTION WAS IN  
SUBSTANTIAL COMPLIANCE WITH THE CONTRACT  
DOCUMENTS.

CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_  
TITLE: \_\_\_\_\_

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: *[Signature]*  
DEVELOPMENT COORDINATOR  
DATE: 8/16/17

DATE	REVISION	BY



CITY OF SUGARLAND, TEXAS  
ENGINEERING DEPARTMENT

FORT BEND, TEXAS

SHOPS IN RIVERSTONE

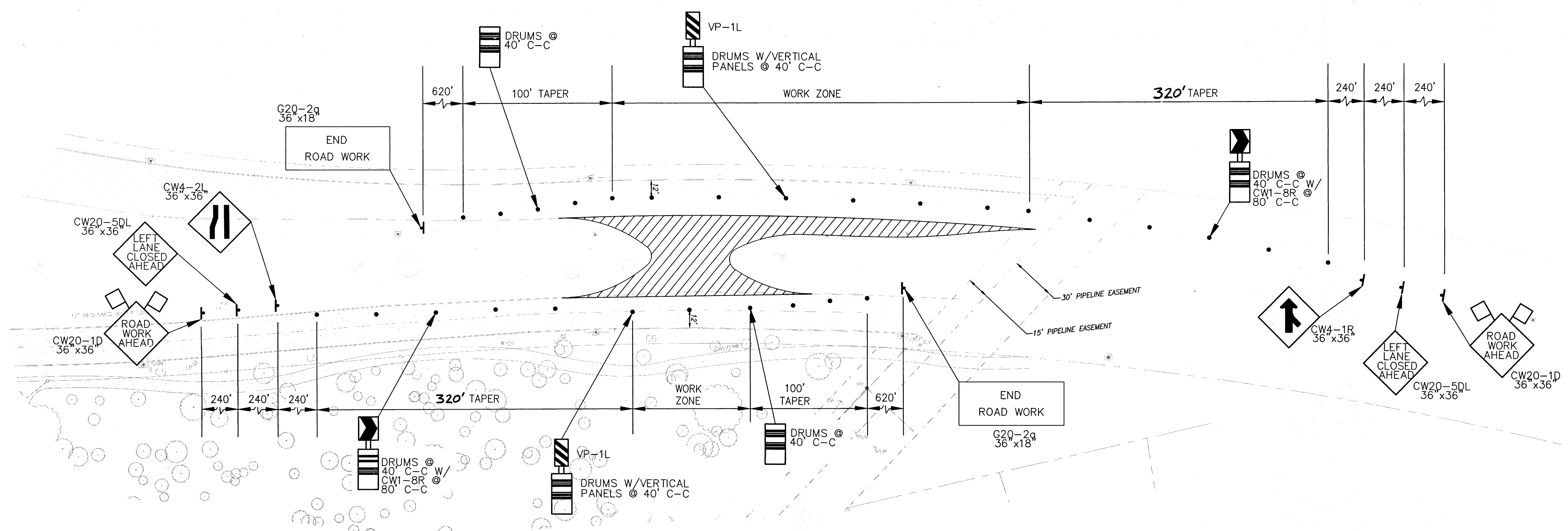
**TRAFFIC CONTROL  
PLAN**

**LJA Engineering, Inc.**  
2929 Briarpark Drive Phone 713.953.5200  
Suite 600 Fax 713.953.5026  
Houston, Texas 77042 FRN - F-1386

LJA PROJECT NO.: 2423-1601P

DESIGNED BY: JRP DRAWN BY: JRP/MMB DATE: AUG 2017

SCALE: 1"=40' SHEET NO. 9 OF 15



**UNIVERSITY BLVD. (R.O.W. VARIES)**  
TRAFFIC CONTROL PLAN FOR LEFT TURN & MEDIAN OPENING CONSTRUCTION IN MEDIAN

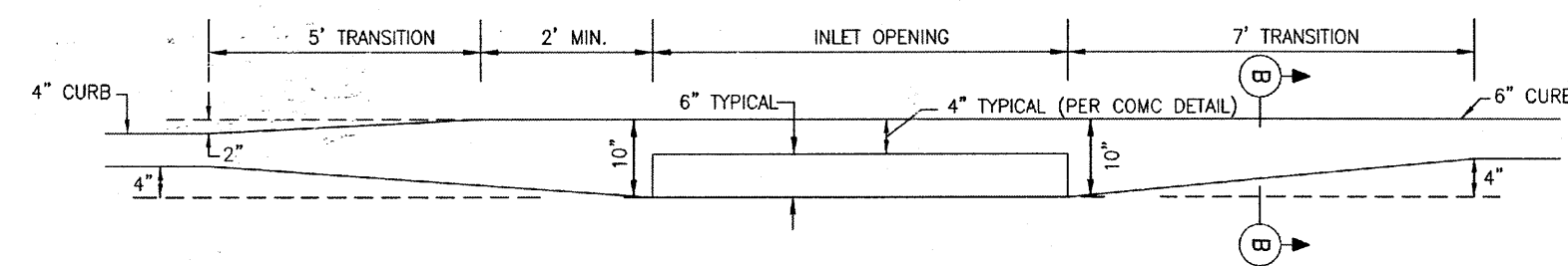
**UNIVERSITY BLVD.  
EXISTING SPEED  
LIMIT 40 MPH**

NOTE: LANE CLOSURES SHALL BE LIMITED TO 9AM - 4PM, MON-FRI

Plot Time: Mon, 07 Aug 2017 - 4:16 PM  
Plot Name: L:\Projects\2423\1601P\2423-1601P\2423-1601P\2423-1601P\Production Drawings\09 TRAFFIC CONTROL PLAN.dwg

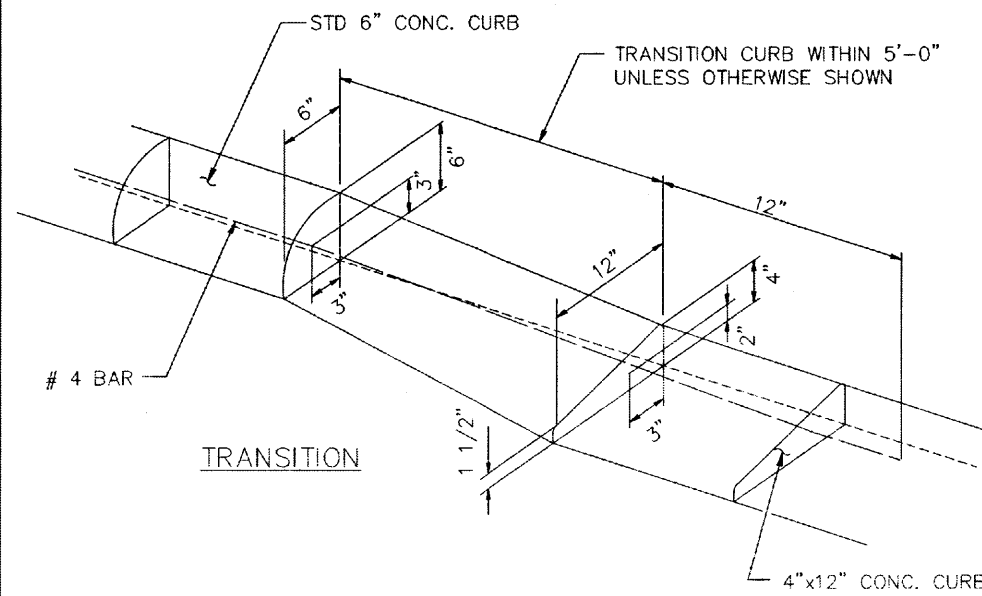
SHOPS IN RIVERSTONE - JOB NO. 2423-1601P

PLOT TIME



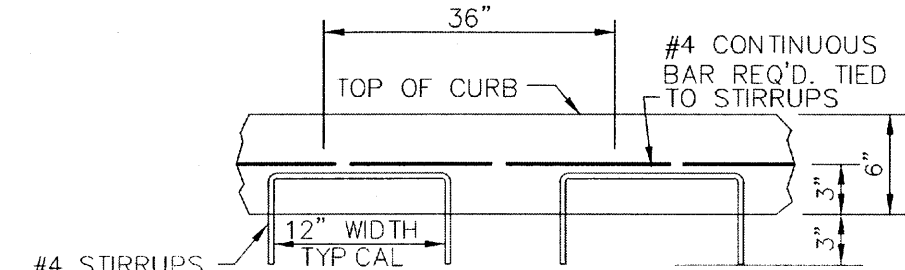
TYPICAL CURB TRANSITION FOR INLET INSTALLATION

SL-ST-13



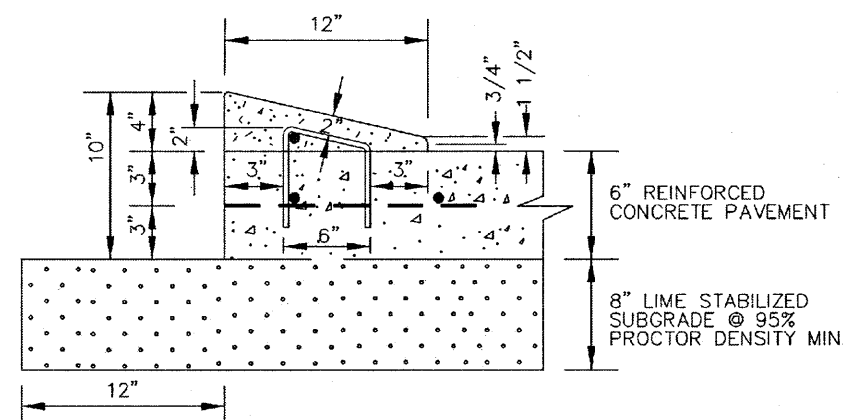
TYPICAL CURB TRANSITION

SL-ST-15



TYPICAL CONCRETE CURB REINFORCING

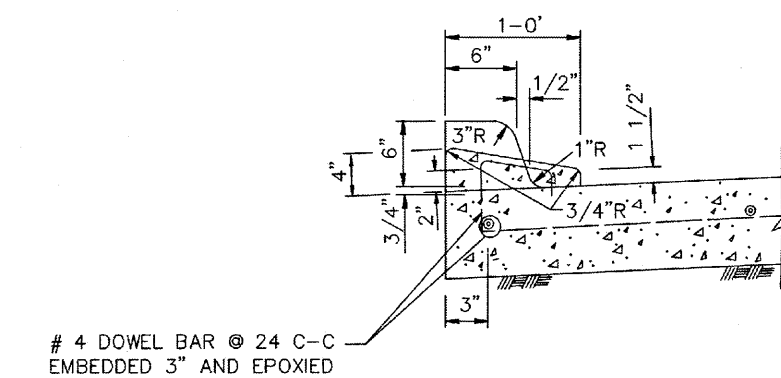
SL-ST-16



4"X12" MOUNTABLE CONCRETE CURB

SL-ST-17

- NOTES:
- 1.0 LBS. OF APPROVED NON-METALLIC FIBER MESH PER C/Y IN 4"X12" CURBS.
  - #3 RE-BAR STIRRUPS TO BE PLACED AT INTERVALS OF 2' (FT) C-C.
  - #4 RE-BAR LONGITUDINAL SHALL BE TIED TO EACH STIRRUP.
  - MOUNTABLE CURB ONLY ALLOWED ON < 41' (FT), UNDIVIDED, RESIDENTIAL ROADWAYS WITHIN SUBDIVISIONS.



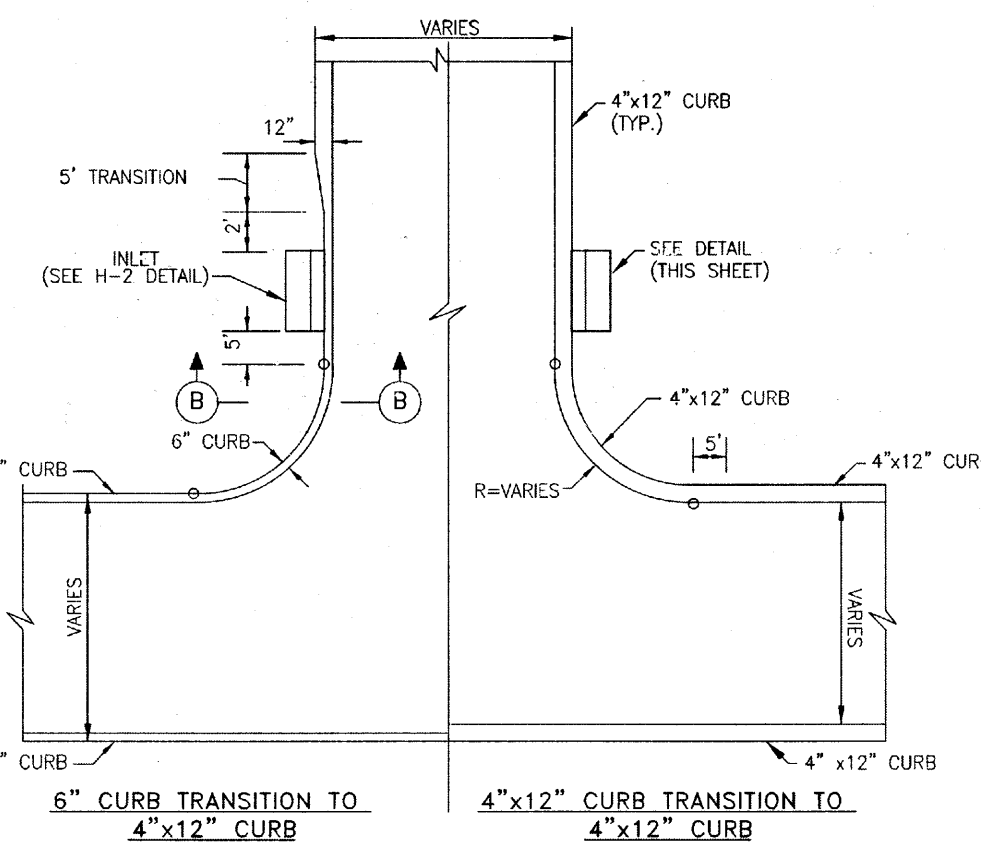
4-INCH x 12-INCH TRANSITION CURB

SL-ST-18

4"X12" MOUNTABLE CONCRETE CURB AND TRANSITION CURB NOTES:

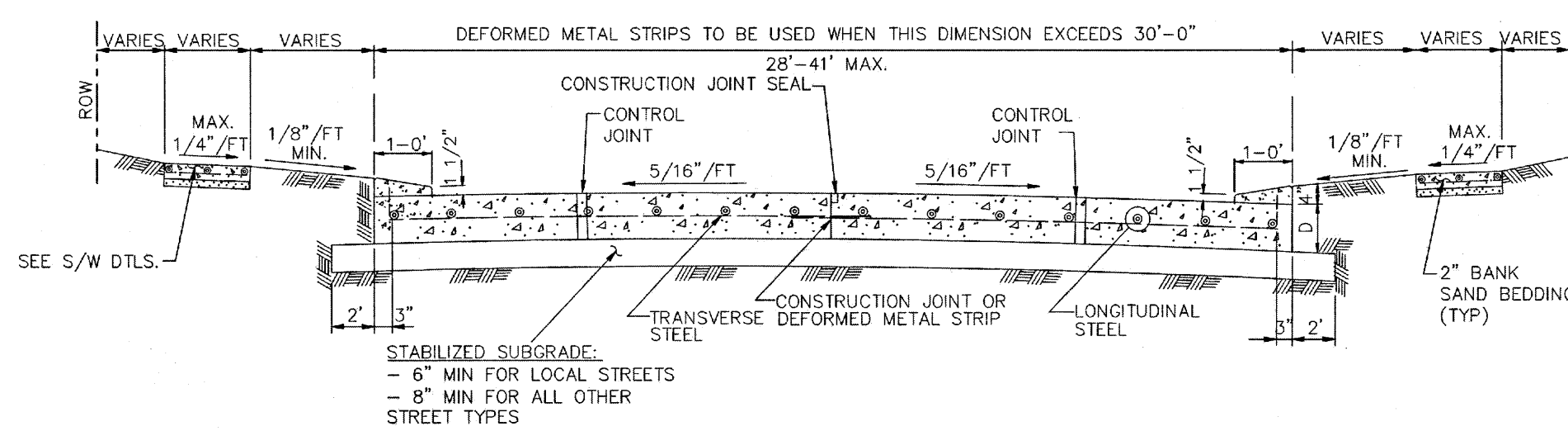
- 6-INCH CONCRETE CURB TO BE CONSTRUCTED ON ALL ESPLANADES, ISLANDS AND NON-RESIDENTIAL STREETS. RESIDENTIAL STREETS MAY BE CONSTRUCTED WITH EITHER 6-INCH CONCRETE CURB OR 4-INCH x 12-INCH CONCRETE CURB AS NOTED ON PLANS.
- ALL 4-INCH x 12-INCH CONCRETE CURBS TO BE POURED SEPARATE FROM PROPOSED CONCRETE PAVEMENT.
- TRANSITIONS FROM 6-INCH CONCRETE CURB TO 4-INCH x 12-INCH CONCRETE CURB TO BE ACCOMPLISHED WITHIN 5 FEET (TYP.), UNLESS OTHERWISE SHOWN. REINFORCING STEEL AS SHOWN IN "4-INCH x 12-INCH TRANSITION CURB" DETAIL IS TO BE INSTALLED.

SL-ST-20



TYPICAL 4"X12" CURB W/INLET TRANSITION FOR CURB RETURNS

SL-ST-14



TYPICAL SINGLE ROADWAY SECTION FOR CONCRETE PAVEMENT WITH 4"X12" CURB

\* SEE 4" x 12" MOUNTABLE CURB DETAIL (THIS SHEET)

SL-ST-19

CONSTRUCTION NOTES:

- 6 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI REINFORCED CONCRETE WITH #4 BARS 24 INCHES C-C, E.W. IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR RESIDENTIAL STREETS.
- 7 INCH, 5.5 SACK CEMENT PER CUBIC YARD CONCRETE, 3500 PSI REINFORCED CONCRETE WITH #4 BARS 24 INCHES C-C, IS THE MINIMUM ACCEPTABLE PAVEMENT CONSTRUCTION FOR COLLECTOR STREETS.
- EIGHT (8) INCH, 5.5 SK, 3500 PSI @ 28 DAYS, REINFORCED WITH #4 18" C.C. EACH WAY IS THE MINIMUM ACCEPTABLE FOR ARTERIAL STREETS.
- TRANSVERSE EXPANSION JOINTS SHALL BE PLACED AT ALL POINTS OF CURVATURE, POINTS OF TANGENCY AND ALL INTERSECTION CURB RETURN POINTS. MAXIMUM SPACING SHALL BE 200' AND BE SEALED CONFORMING TO TxDOT ITEM 360 (& ITEM 438) AND TxDOT DMS-6310, CLASS-2.
- TRANSVERSE CONTROL JOINTS ARE REQUIRED AT MAXIMUM SPACING OF 20'-0" C-C, AND VERTICAL CURB JOINTS TO BE SEALED WITH SPECIAL JOINT SEALANT ASTM-D-1190-74 OR AASHTO-M173-60 FOR PAVEMENT 8" THICK AND GREATER. (ELASTOMERIC TYPE HOT POURED)
- PAVEMENT FINISH SHALL BE BAKER BROOM FINISH. CURING COMPOUND ON ALL CONCRETE.
- 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 SUGAR LAND.
- UNSTABLE SUBGRADE SHALL BE EXCAVATED AND REPLACED WITH CEMENT STABILIZED SAND.
- USE 1"x2" REDWOOD STAKES FOR HEADERS.
- EDGE ALL SIDES WITH EDGING TOOL.
- DOWEL SHALL BE 3/4" DIAMETER, WITH MINIMUM 8" PENETRATION (BOTH SIDES).
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CITY OF SUGAR LAND OF ANY BIRDBATH PROBLEMS PRIOR TO CONSTRUCTION OF DRIVEWAY.
- REFER TO GENERAL, C.S.S., AND PAVEMENT NOTES.
- 1.0 LBS. OF APPROVED POLYPROPYLENE FIBER MESH PER C/Y IN 4"X12" CURBS REQUIRED.

SL-ST-20

BENCHMARK:

BENCHMARK PUBLISHED ELEVATION - 70.14'  
CITY OF SUGAR LAND REFERENCE MARK NUMBER SGR-1, BEING A BRASS DISK STAMPED "RM 001" LOCATED ON A MEDIAN ON ELKINS RD APPROX. 2.15 MILES SOUTH OF WILLIAMS TRACE BLVD. ELEV. 70.14', NAVD88, 2001 ADJUSTMENT.

TEMPORARY BENCHMARK "A" ELEVATION - 66.75'  
BOX CUT ON A STORM INLET LOCATED ON THE EAST SIDE OF WEST AVALON DRIVE APPROX. 260 FEET SOUTH OF UNIVERSITY BLVD. (AS SHOWN HEREON)

TEMPORARY BENCHMARK "B" ELEVATION - 67.12'  
BOX CUT ON A STORM INLET LOCATED ON THE SOUTH SIDE OF UNIVERSITY BLVD. APPROX. 180 FEET EAST OF WEST AVALON DRIVE. (AS SHOWN HEREON)

RECORD DRAWING

I HEREBY CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION, AND GRADE; AND THAT THE CONSTRUCTION WAS IN SUBSTANTIAL COMPLIANCE WITH THE CONTRACT DOCUMENTS.

CONTRACTOR: DATE:

TITLE:

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: DEVELOPMENT COORDINATOR

DATE: 8/16/17

DATE	REVISION	BY



CITY OF SUGAR LAND, TEXAS  
ENGINEERING DEPARTMENT

FORT BEND, TEXAS

SHOPS IN RIVERSTONE

PAVEMENT DETAILS  
1 OF 2

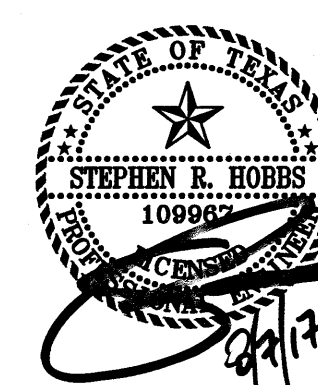
LJA Engineering, Inc.

2929 Briarpark Drive Suite 600 Houston, Texas 77042  
Phone 713.953.5200 Fax 713.953.5026 FRN-F-1386

LJA PROJECT NO.: 2423-1601P

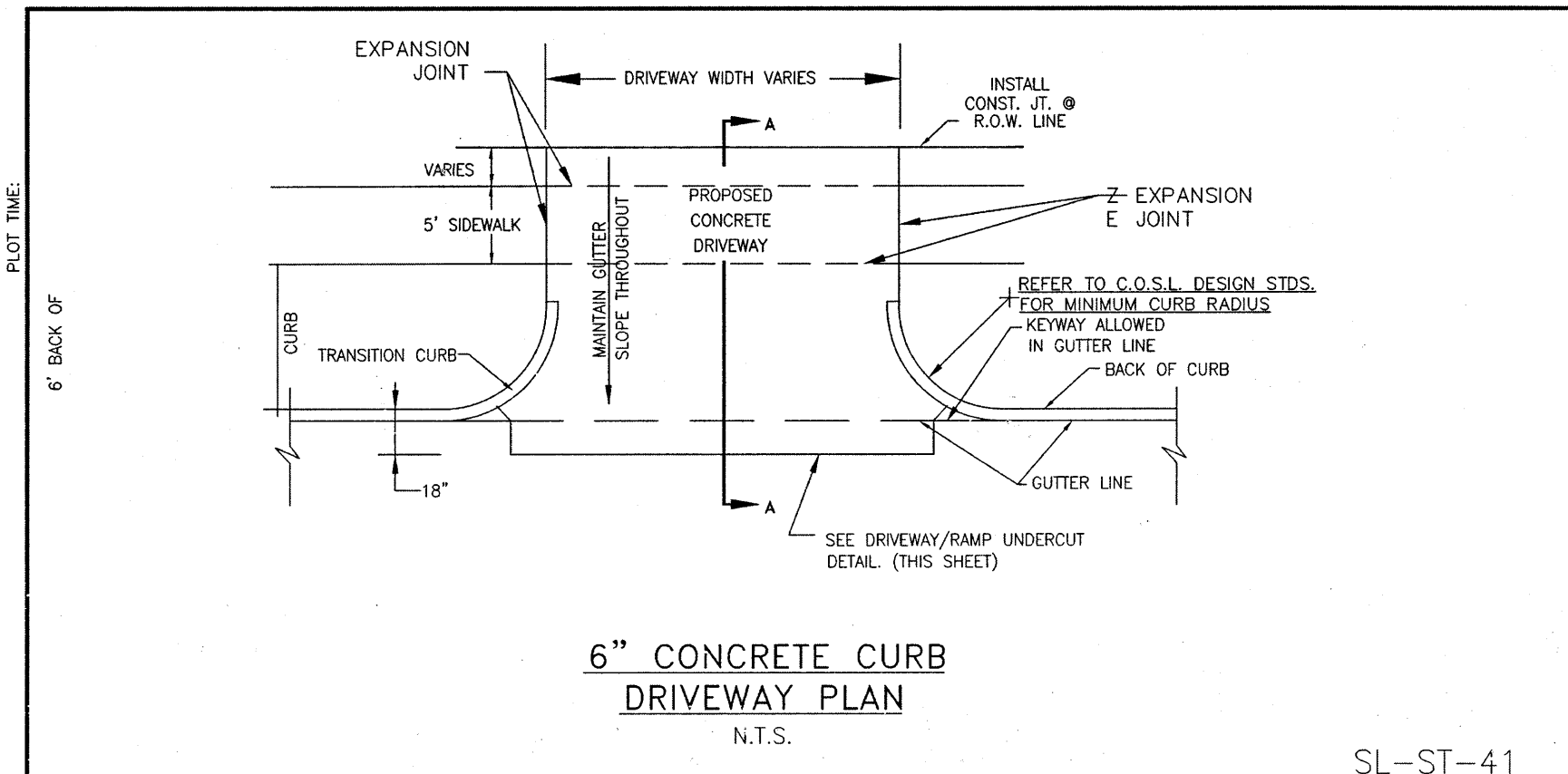
DESIGNED BY: JRP DRAWN BY: JRP/MMB DATE: AUG 2017

SCALE: NTS SHEET NO. 10 OF 15



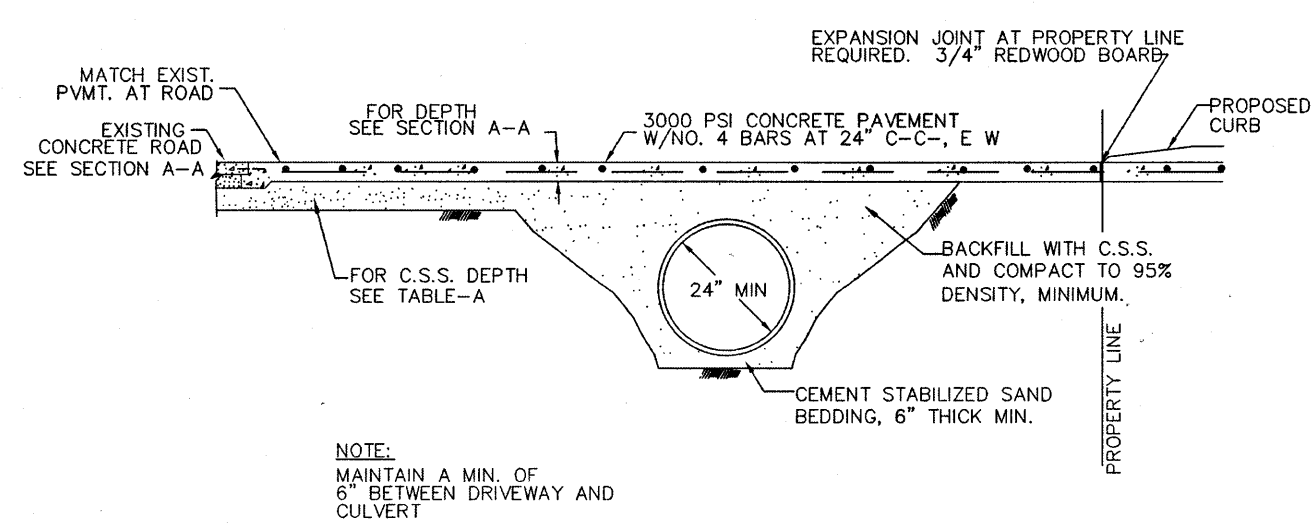
SHOPS IN RIVERSTONE - JOB NO. 2423-1601P





6" CONCRETE CURB  
DRIVEWAY PLAN  
N.T.S.

SL-ST-41

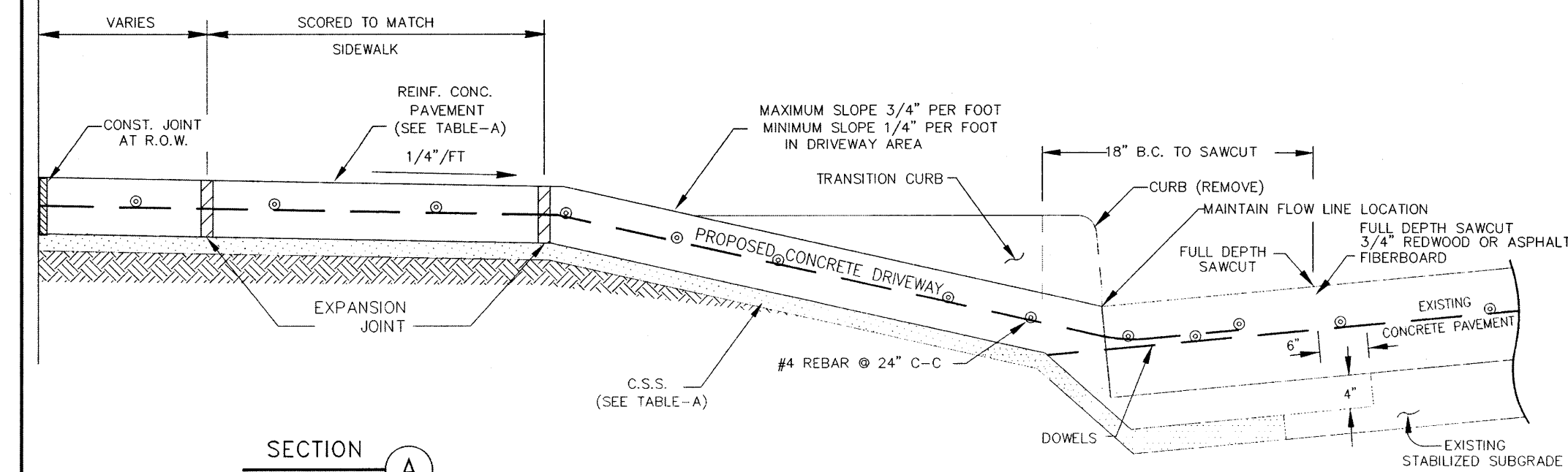


CONCRETE APRON DETAIL - DRIVEWAY PROFILE  
FOR CULVERT DRAINAGE  
N.T.S.

SL-ST-42

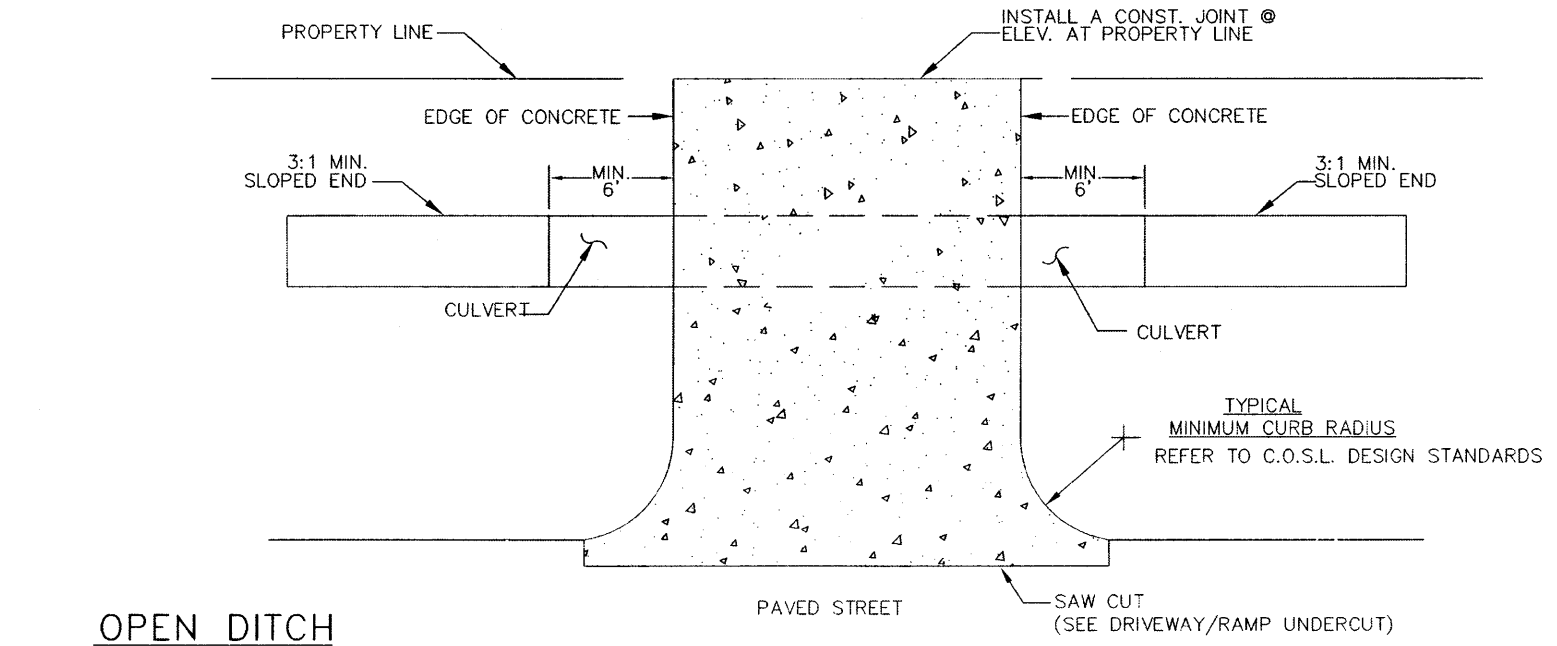
- NOTES:
- 1.) SAW CUT & BREAKOUT NO MORE THAN 72 HOURS PRIOR TO PROPOSED CONCRETE PLACEMENT. NOTIFY SUGAR LAND PRIOR TO CUT.
  - 2.) UNSTABLE SUBGRADE SHALL BE OVER EXCAVATED & REPLACED WITH CONCRETE.
  - 3.) IT IS CONTRACTOR'S RESPONSIBILITY TO NOTIFY SUGAR LAND OF ANY BIRD BATH PROBLEMS PRIOR TO CONSTRUCTION OF DRIVEWAY.
  - 4.) USE 1"x2" TREATED REDWOOD FOR HEADER.
  - 5.) EDGE ALL SIDES WITH EDGING TOOL AND BROOM FINISH.
  - 6.) FOR INDUSTRIAL DRIVES, PAVEMENT SHALL HAVE A DEPTH OF 8" (IN).
  - 7.) EXPANSION JOINT AT PROPERTY LINE REQUIRED. 3/4" REDWOOD BOARD WITH NO. 4 DOWELS MINIMUM.
  - 8.) MAXIMUM ALLOWABLE DRIVEWAY GRADE IN PUBLIC R.O.W. IS 5%.
  - 9.) DRIVEWAY GRADE MUST MEET A.D.A. AND T.A.S. SIDEWALK SLOPE. SIDEWALKS MUST BE SCORED TO MATCH ADJACENT SIDEWALK. IF SLOPE IS CONTINUED THROUGH THE R.O.W. LINE, PROVIDE A 3/4" REDWOOD EXPANSION JOINT WITH DOWELS AT R.O.W. LINE.
  - 10.) REFER TO GENERAL, C.S.S., ASPHALT, AND CONCRETE PAVEMENT NOTES.

SL-ST-49



SECTION A

SL-ST-43



OPEN DITCH  
CONCRETE DRIVEWAY PLAN  
(USED ONLY WHEN CONNECTING TO A CONCRETE ROADWAY)  
N.T.S.

SL-ST-44

TABLE-A  
CEMENT STABILIZED SAND  
2-SK/C.Y.

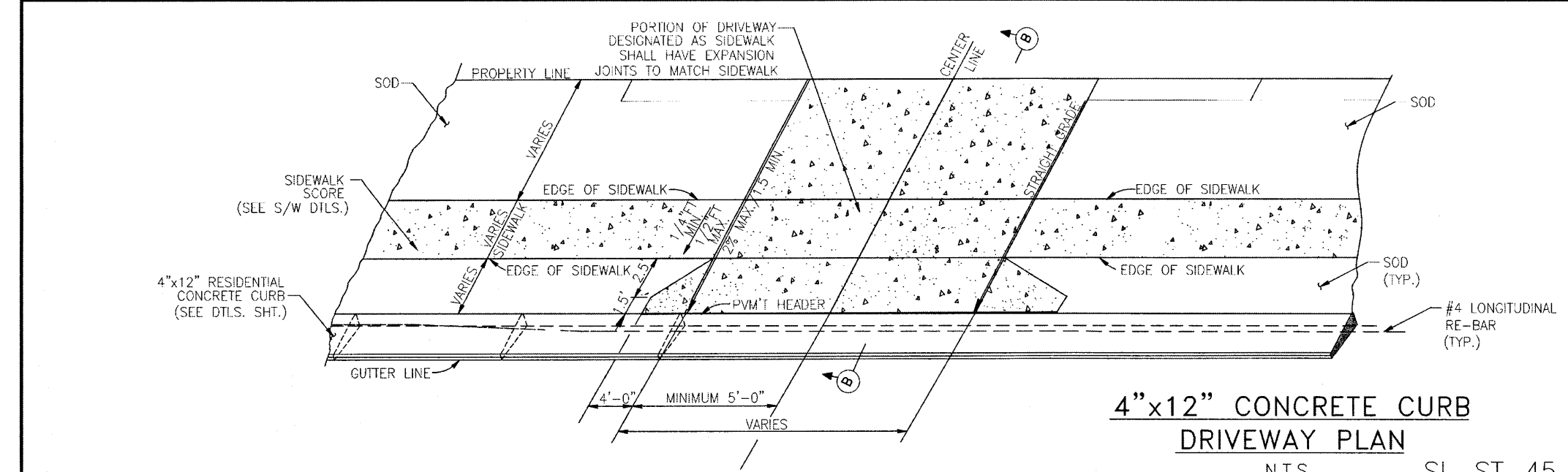
RESIDENTIAL	4" MINIMUM
COMMERCIAL	6" MINIMUM
INDUSTRIAL	8" MINIMUM

REINFORCED CONCRETE  
PAVEMENT  
3000 PSI MIN

RESIDENTIAL	4" MINIMUM
COMMERCIAL	6" MINIMUM
INDUSTRIAL	8" MINIMUM

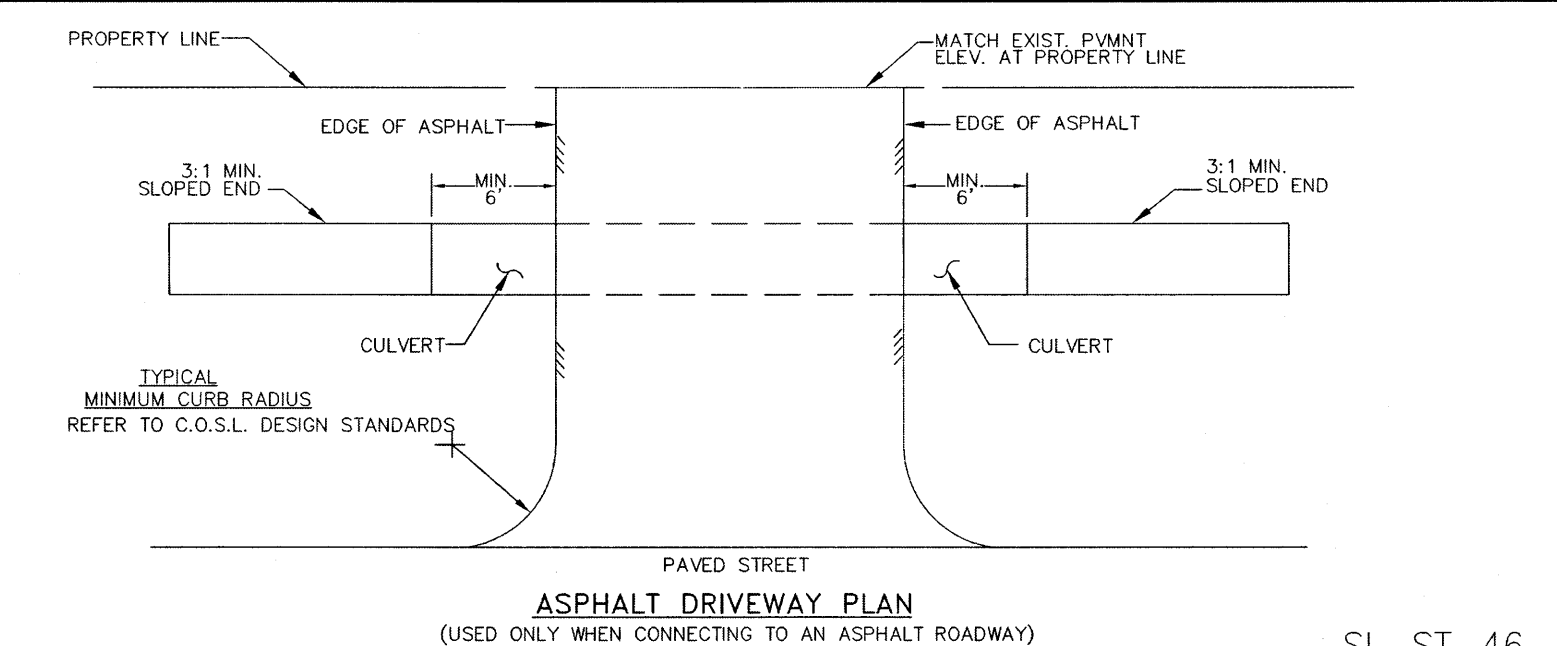
REFER TO C.O.S.L. DESIGN STANDARDS

DRIVEWAY  
PAVEMENT  
CONSTRUCTION TABLE



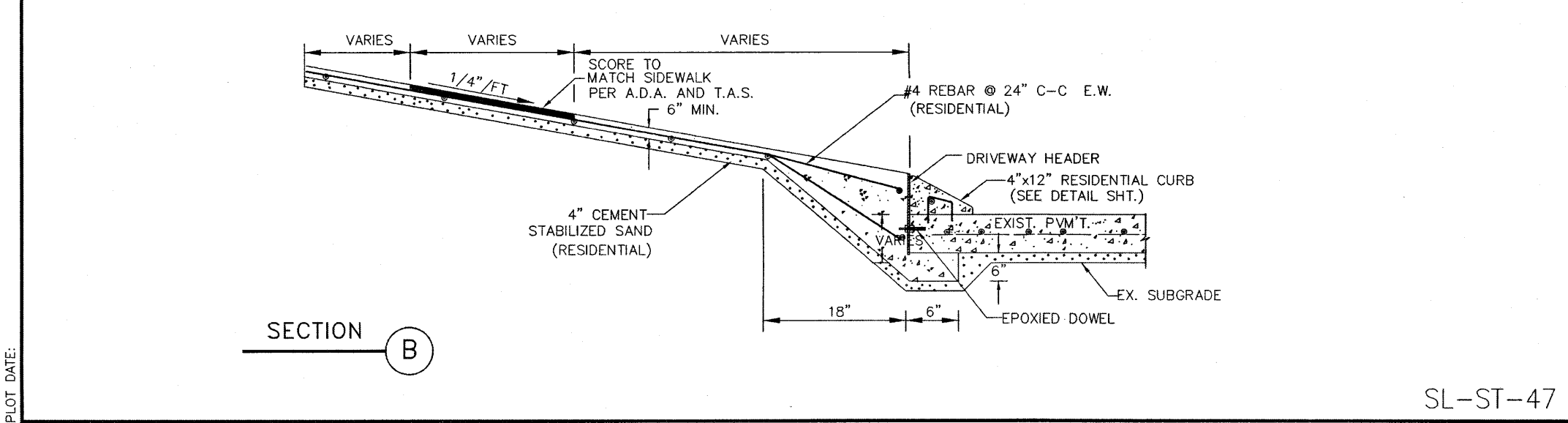
4"x12" CONCRETE CURB  
DRIVEWAY PLAN  
N.T.S.

SL-ST-45



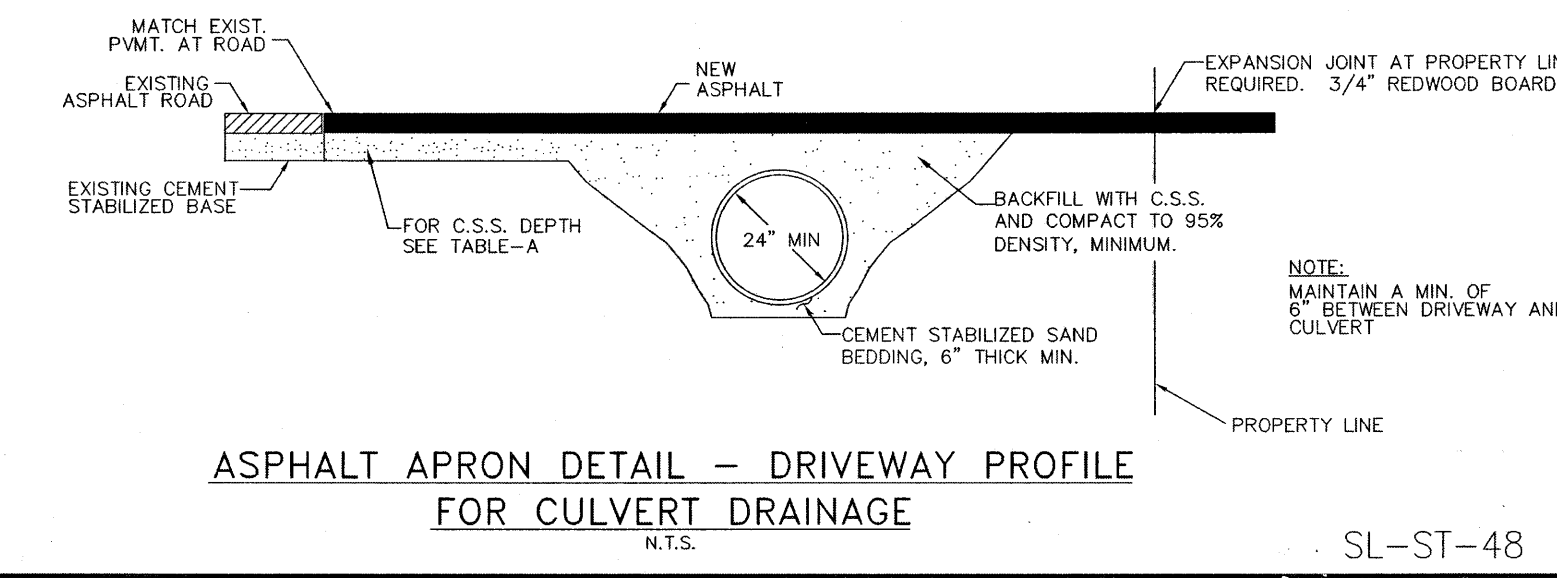
ASPHALT DRIVEWAY PLAN  
(USED ONLY WHEN CONNECTING TO AN ASPHALT ROADWAY)  
N.T.S.

SL-ST-46



SECTION B

SL-ST-47



ASPHALT APRON DETAIL - DRIVEWAY PROFILE  
FOR CULVERT DRAINAGE  
N.T.S.

SL-ST-48

CITY OF SUGAR LAND  
ENGINEERING DEPARTMENT

CONSTRUCTION PLANS FOR:

DRIVEWAY  
CONSTRUCTION DETAILS

SL-27

BENCHMARK:  
PUBLISHED ELEVATION - 70.14'  
CITY OF SUGAR LAND REFERENCE MARK NUMBER  
SGR-1, BEING A BRASS DISK STAMPED "RM 001"  
LOCATED ON A MEDIAN ON ELKINS RD APPROX.  
2.15 MILES SOUTH OF WILLIAMS TRACE BLVD.  
ELEV. 70.14', NAVD88, 2001 ADJUSTMENT.

TEMPORARY BENCHMARK "A" ELEVATION - 66.75'  
BOX CUT ON A STORM INLET LOCATED ON THE  
EAST SIDE OF WEST AVALON DRIVE APPROX. 260  
FEET SOUTH OF UNIVERSITY BLVD. (AS SHOWN  
HEREON)

TEMPORARY BENCHMARK "B" ELEVATION - 67.12'  
BOX CUT ON A STORM INLET LOCATED ON THE  
SOUTH SIDE OF UNIVERSITY BLVD. APPROX. 180  
FEET EAST OF WEST AVALON DRIVE. (AS SHOWN  
HEREON)

RECORD DRAWING

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CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: *[Signature]*  
DEVELOPMENT COORDINATOR

DATE: 8/16/17

DATE	REVISION	BY

CITY OF SUGAR LAND  
ENGINEERING DEPARTMENT

CITY OF SUGARLAND, TEXAS  
ENGINEERING DEPARTMENT

FORT BEND, TEXAS

SHOPS IN RIVERSTONE

PAVEMENT DETAILS  
2 OF 2

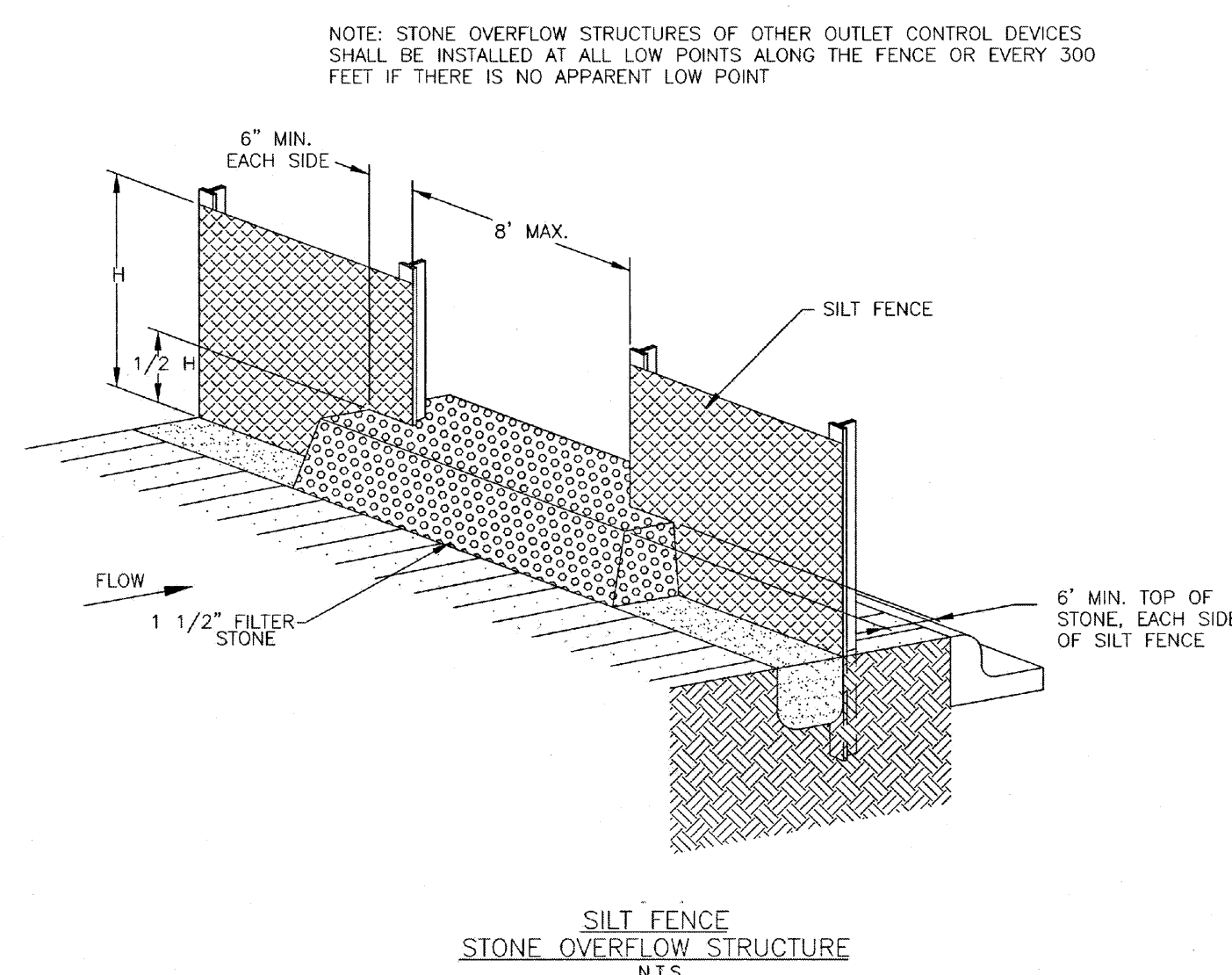
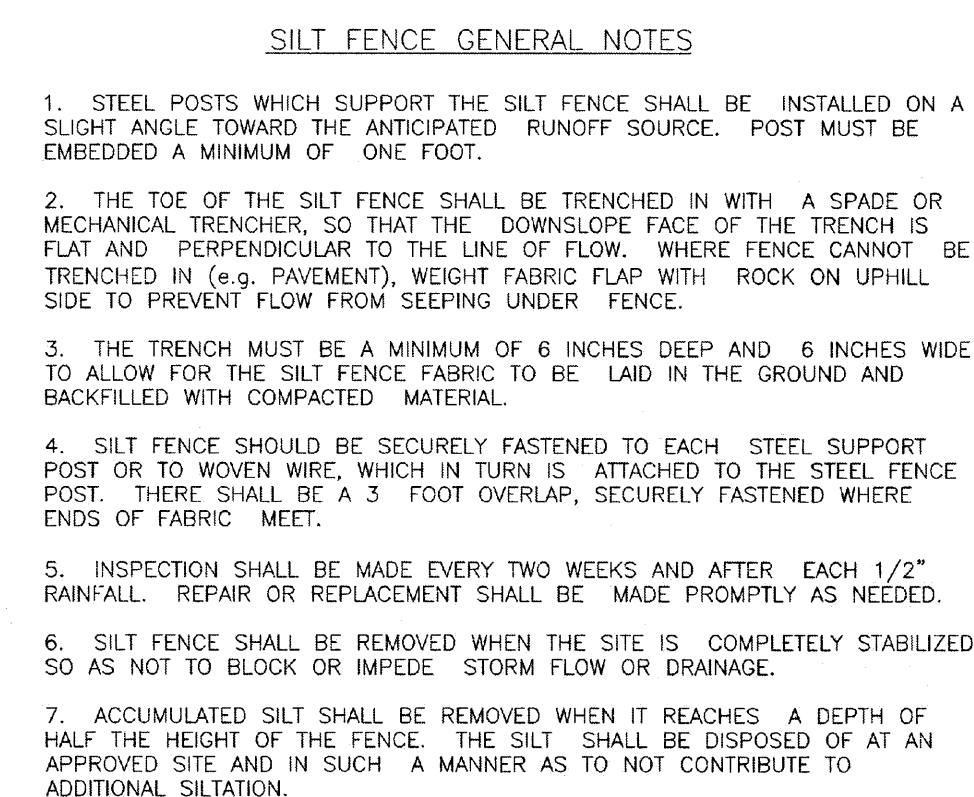
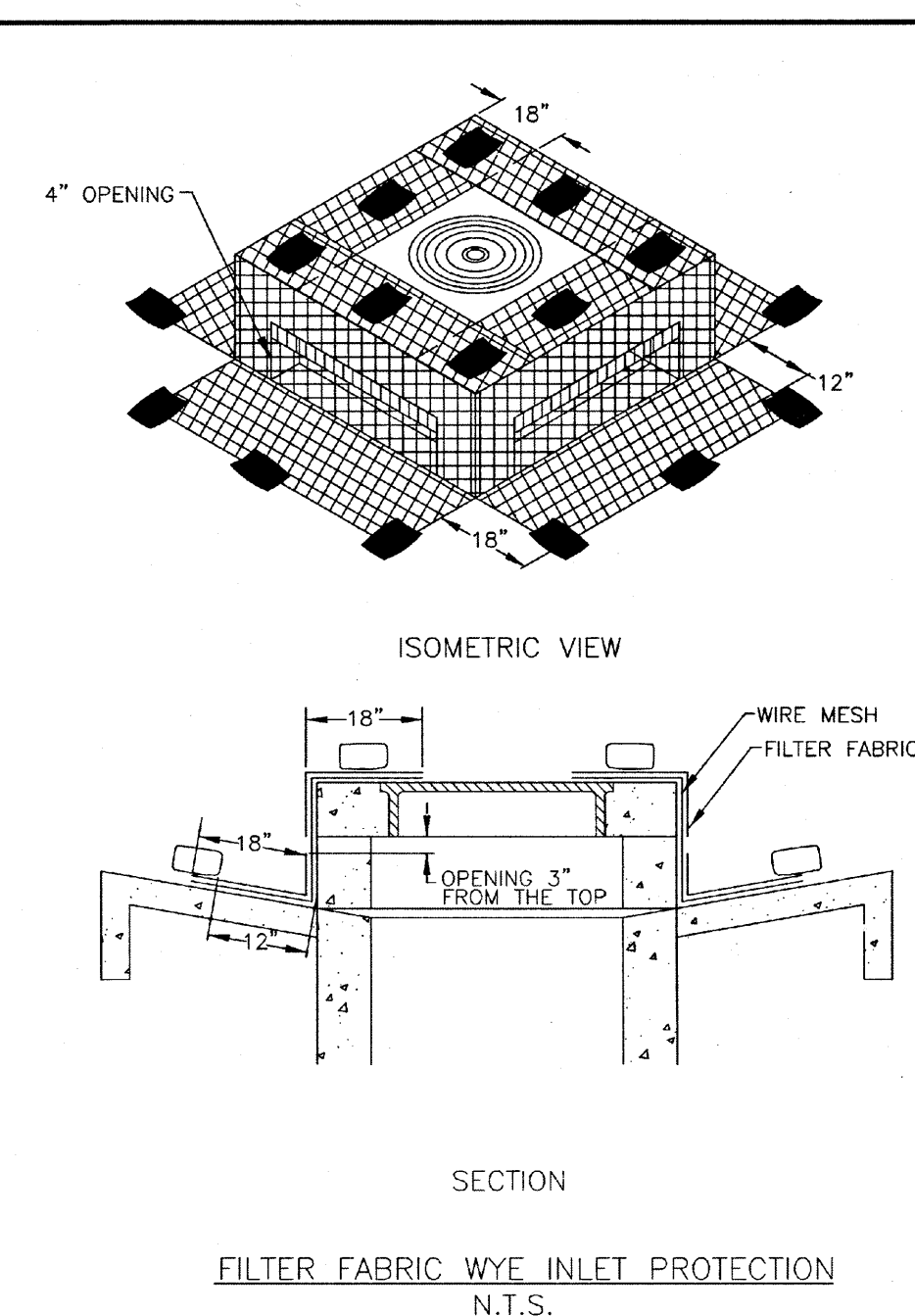
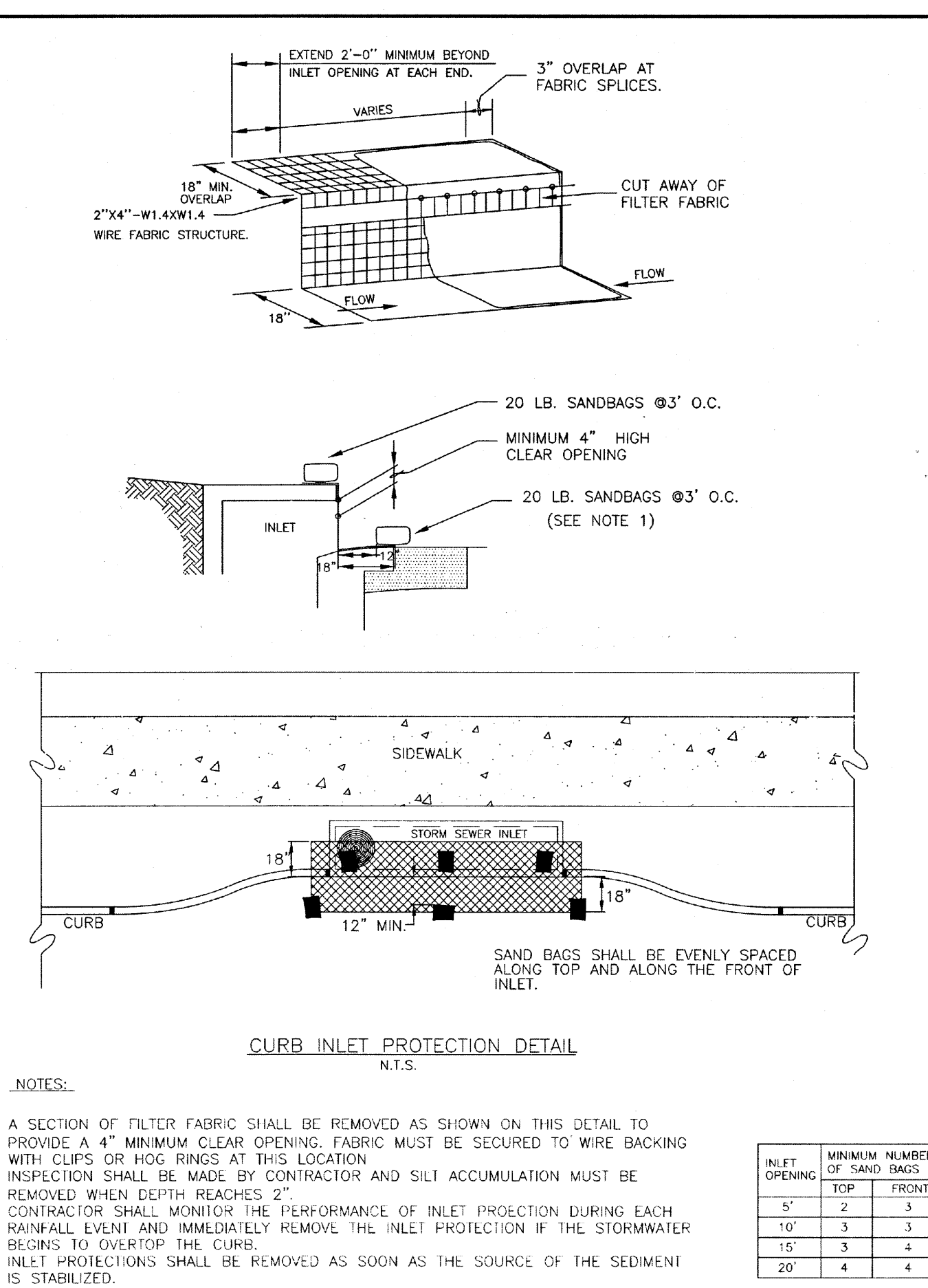
LJA Engineering, Inc.  
2929 Briarpark Drive  
Suite 600  
Houston, Texas 77042  
Phone 713.953.5200  
Fax 713.953.5026  
FRN-F-1386

LJA PROJECT NO.: 2423-1601P

DESIGNED BY: JRP  
DRAWN BY: JRP/MMB  
DATE: AUG 2017

SCALE: NTS  
SHEET NO. 11 OF 15

\\P:\Projects\2423\1601P\COO\Production Drawings\11 PAVEMENT DETAILS 2 OF 2.dwg  
Date: 07 Aug 2017 4:16 PM  
User: jrp




TEMPORARY BENCHMARK "B" ELEVATION - 67.12'  
BOX CUT ON A STORM INLET LOCATED ON THE  
SOUTH SIDE OF UNIVERSITY BLVD. APPROX. 180  
FEET EAST OF WEST AVALON DRIVE. (AS SHOWN  
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TITLE: \_\_\_\_\_

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: [Signature]  
DEVELOPMENT COORDINATOR

DATE: 8/16/1

[illegible]

CITY OF SUGARLAND, TEXAS  
ENGINEERING DEPARTMENT

FORT PEND, TEXAS

## SHOPS IN RIVERSTONE

EROSION CONTROL  
DETAILS 1 OF 2

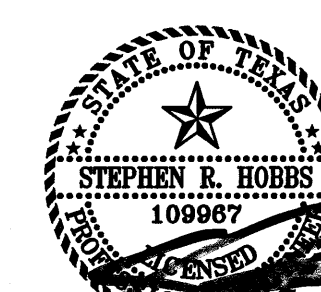
**LJA Engineering, Inc.**

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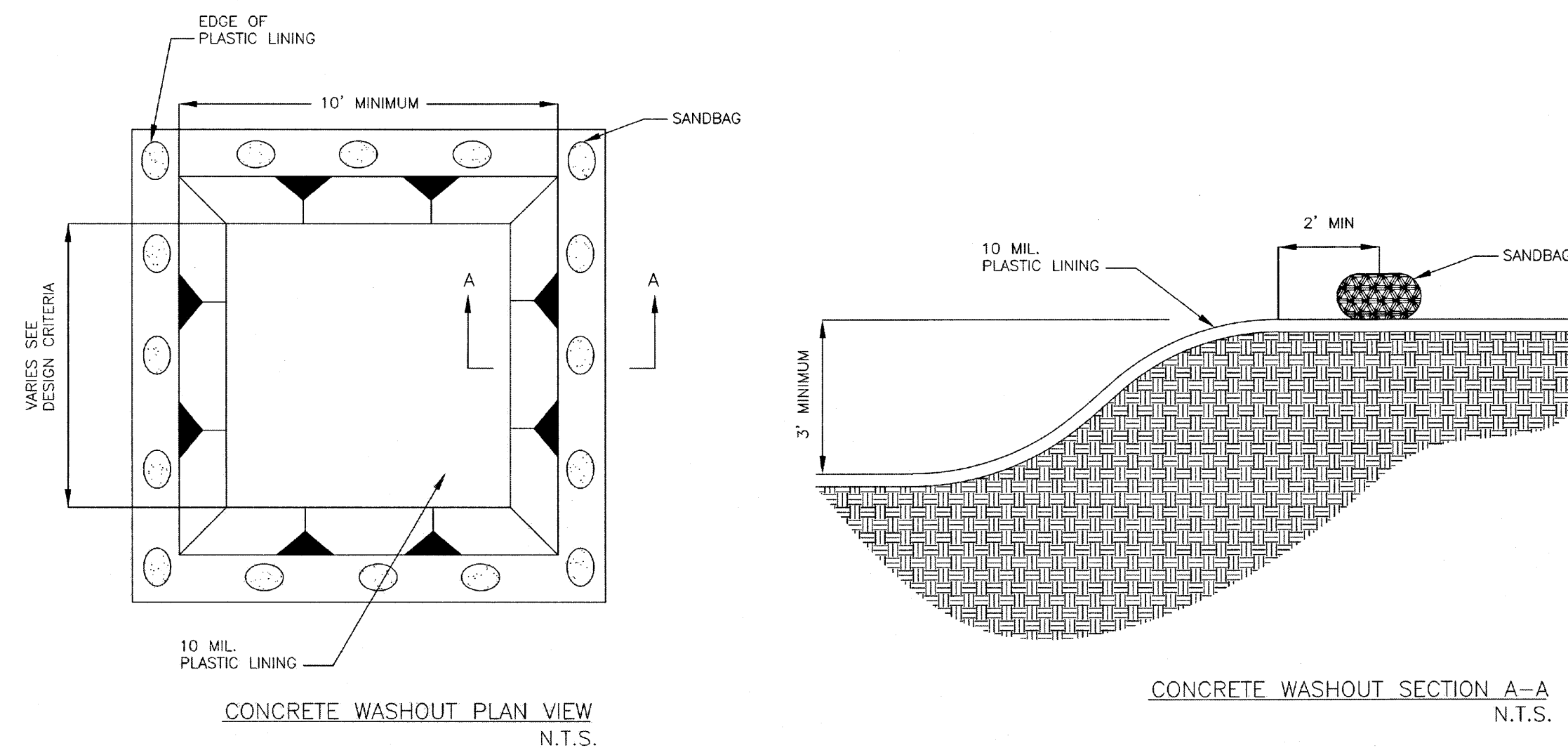
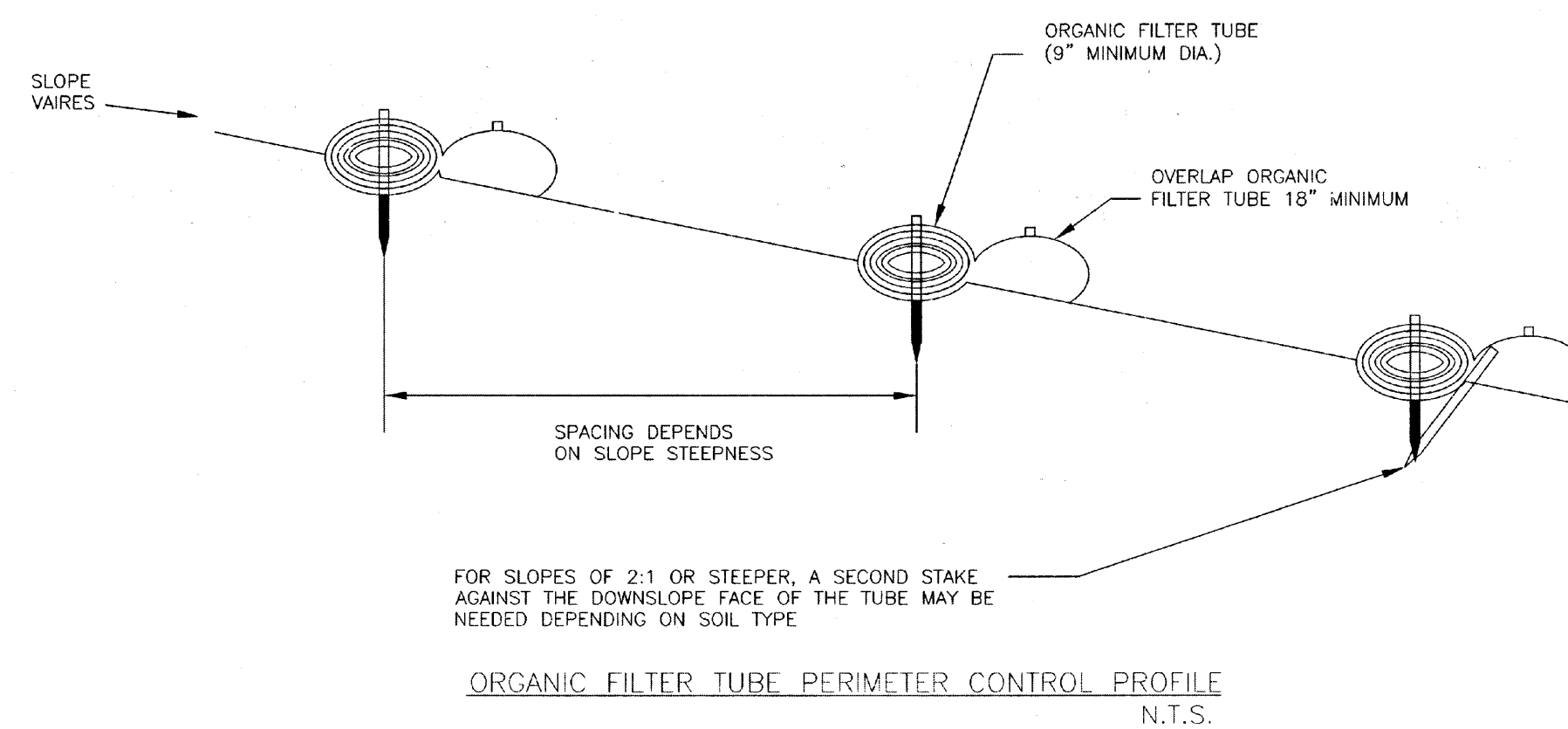
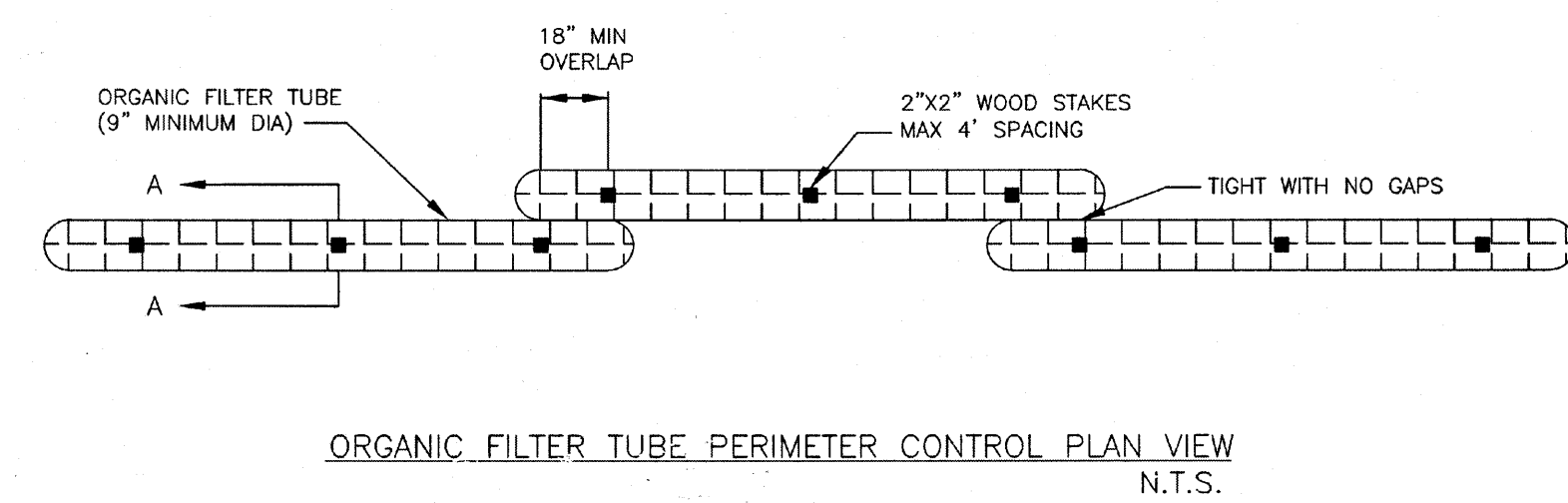
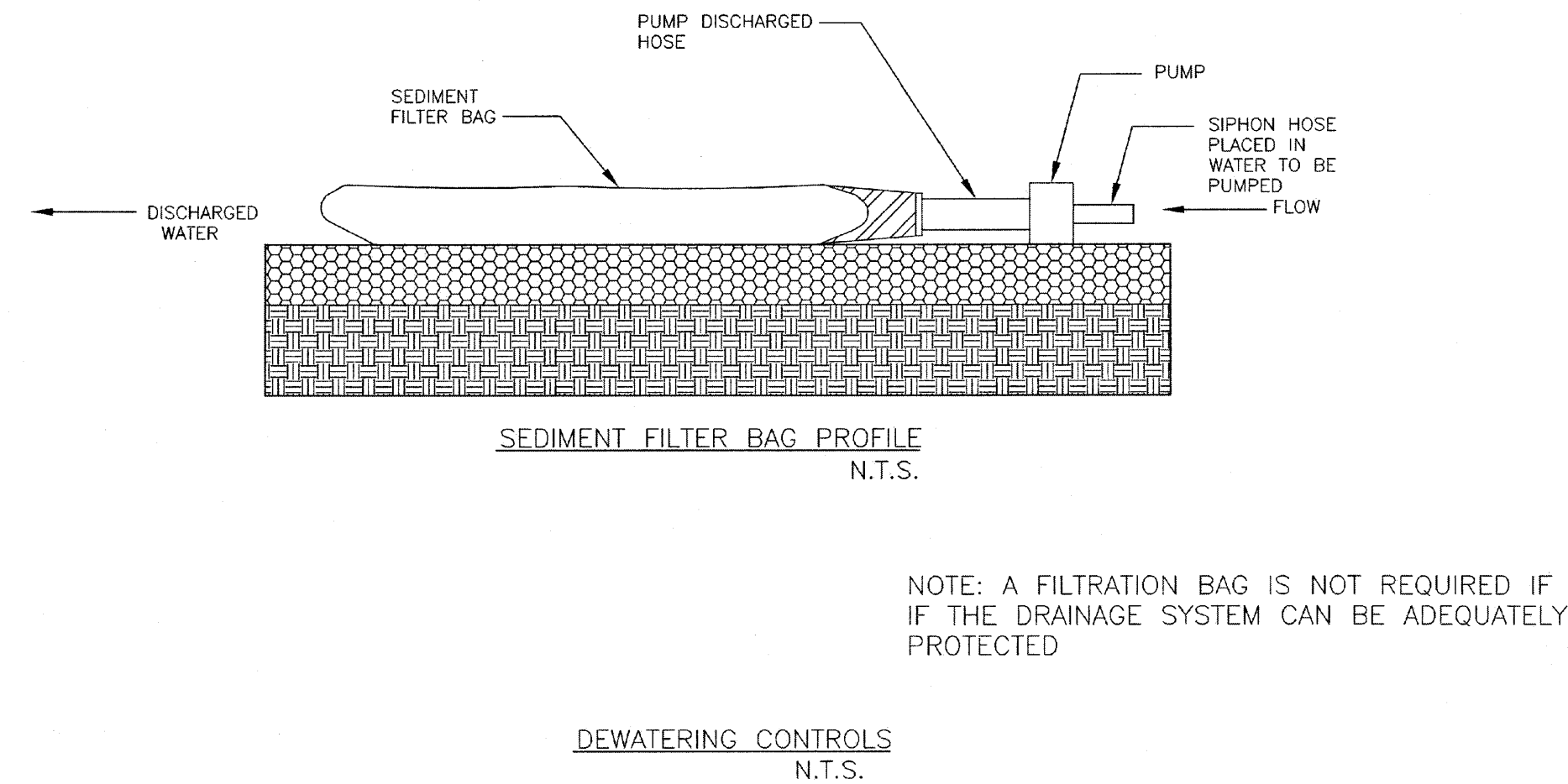
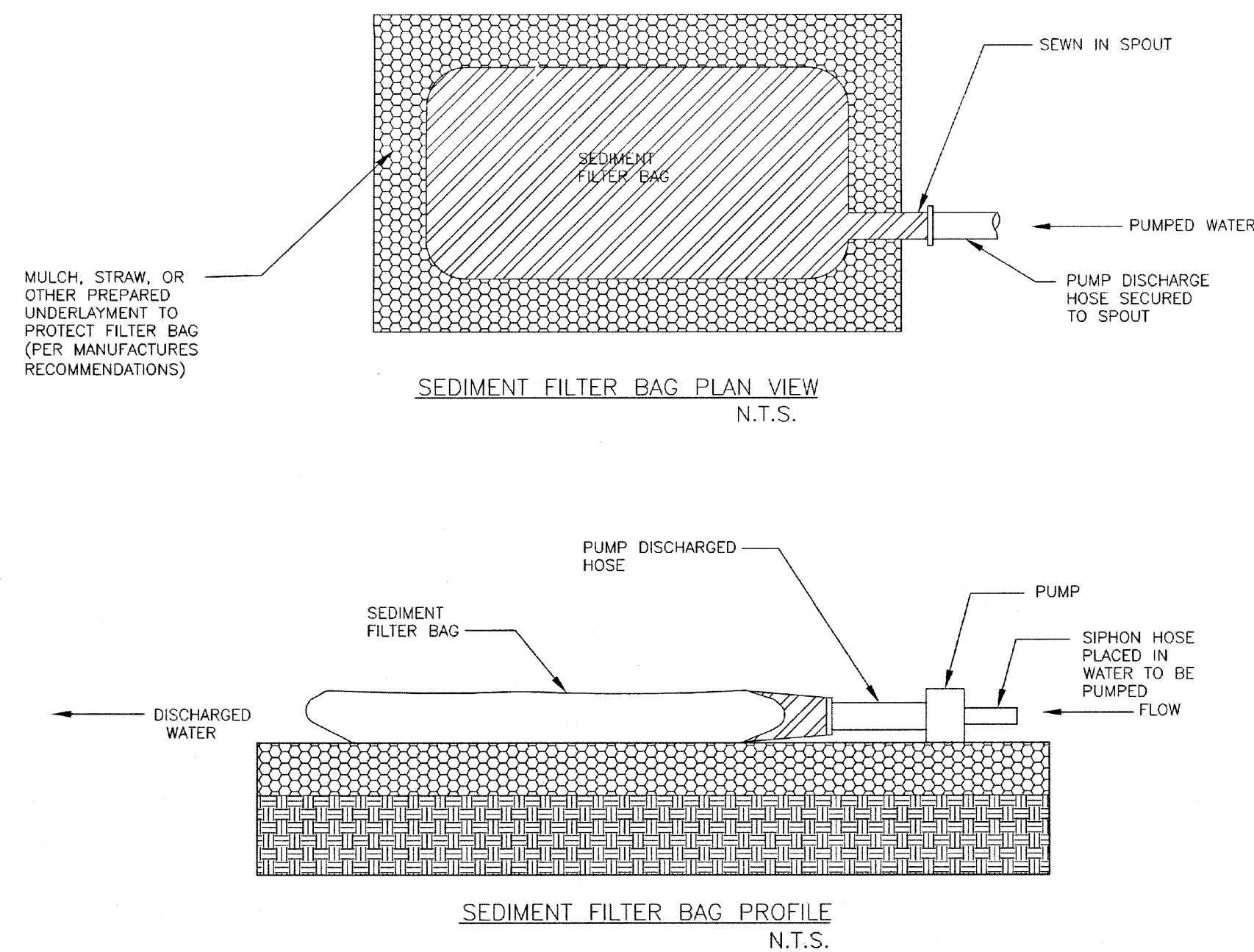
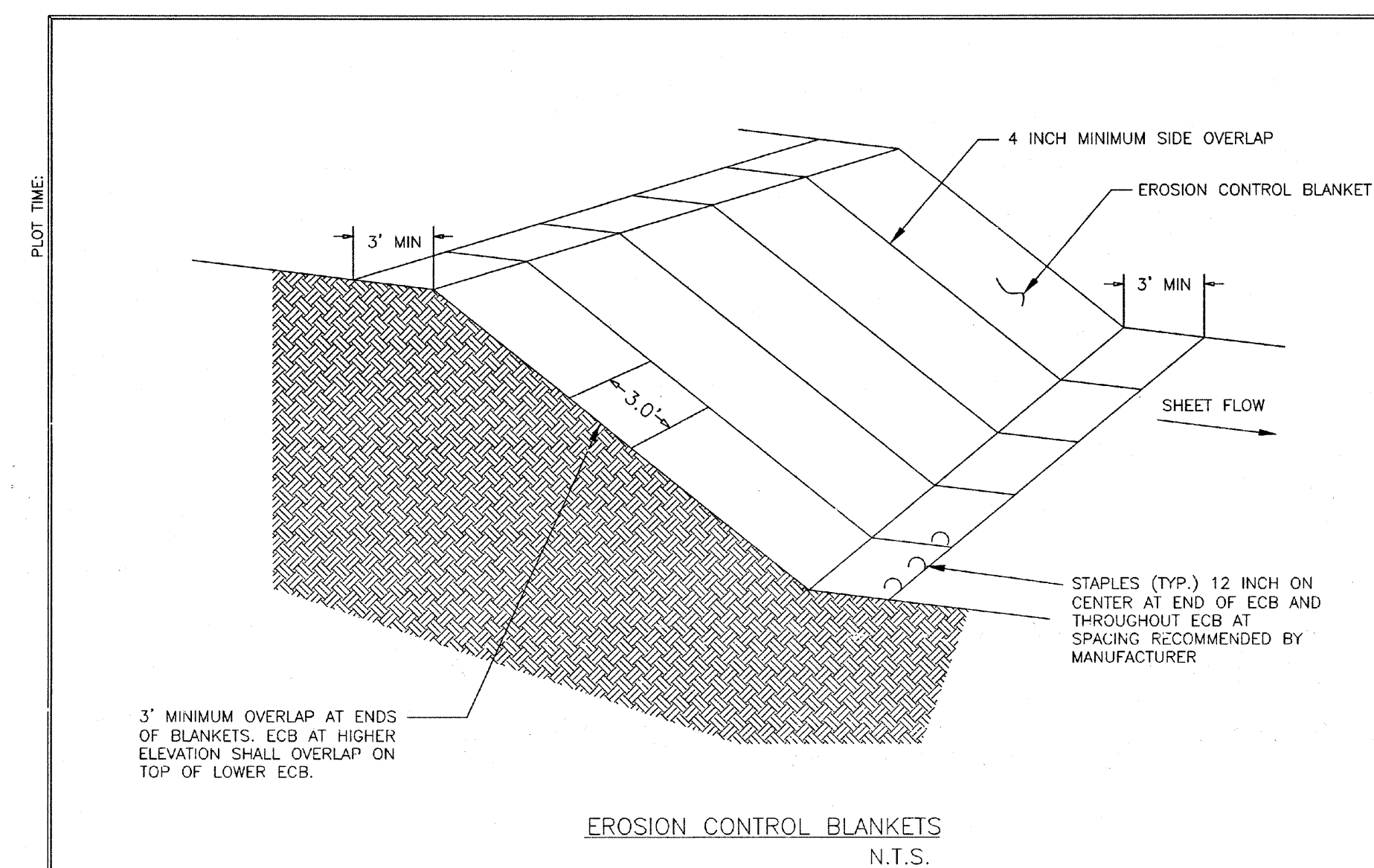
LJA PROJECT NO.: 2423-1601F

DESIGNED BY:	DRAWN BY:	DATE:
JRP	JRP/MMB	AUG 2017

SCALE:	SHEET NO. 12 OF 15
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## ORGANIC FILTER TUBES NOTES

1. TYPE OF NETTING, FILTER MATERIAL, DIAMETER OF TUBE, AND SPACING OF TUBES SHALL BE SPECIFIED BY THE DESIGNER BASED ON THE FOLLOWING SITE PARAMETERS:
  - SIZE OF CONTRIBUTING DRAINAGE AREA
  - STEEPNESS OF SLOPE
  - GROUND CONDITIONS (SOIL OR PAVEMENT)
2. DESIGNER SHALL SHOW ON THE DRAWINGS THE LOCATIONS WHERE TUBE ARE TO BE TURNED UPSLOPE. UPSLOPE LENGTHS SHALL BE MINIMUM OF 10 FEET.

BENCHMARK:

**BENCHMARK PUBLISHED ELEVATION - 70.14'**  
CITY OF SUGAR LAND REFERENCE MARK NUMBER  
SGR-1, BEING A BRASS DISK STAMPED "RM 001"  
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2.15 MILES SOUTH OF WILLIAMS TRACE BLVD.  
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BOX CUT ON A STORM INLET LOCATED ON THE  
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HEREON)

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CONTRACTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

FORT BEND COUNTY ENGINEERING DEPARTMENT

APPROVED: *[Signature]*  
DEVELOPMENT COORDINATOR

DATE: 8/16/17

[illegible]

CITY OF SUGARLAND, TEXAS  
ENGINEERING DEPARTMENT

FORT BEND, TEXAS.

## SHOPS IN RIVERSTONE

EROSION CONTROL  
DETAILS 2 OF 2

**LJA Engineering, Inc.**

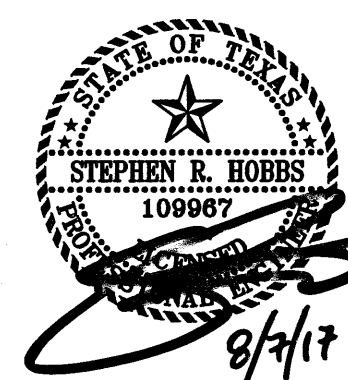
2929 Briarpark Drive Phone 713.953.5200  
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Houston, Texas 77042 FRN - F-1386

LJA PROJECT NO.: 2423-1601P

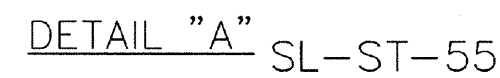
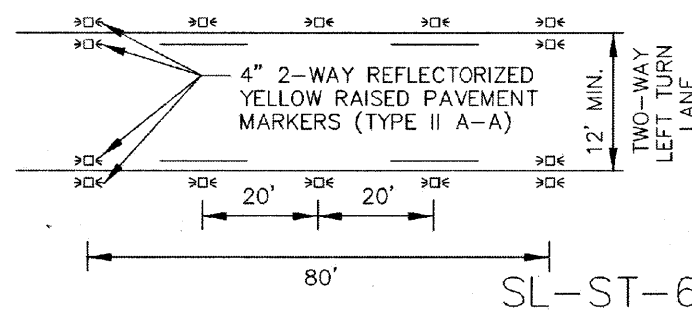
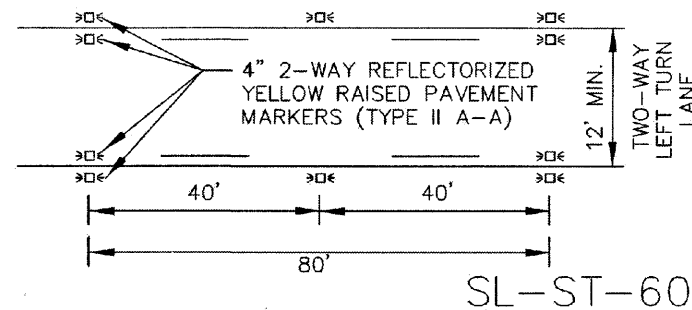
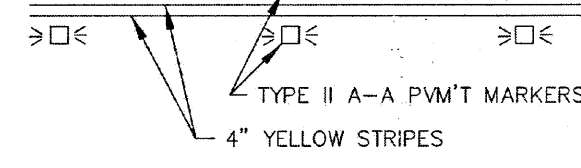
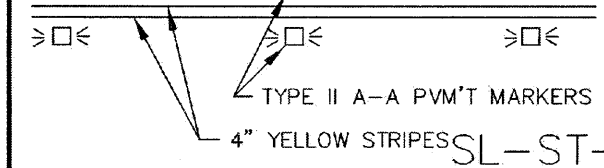
DESIGNED BY: JRP	DRAWN BY: JRP/MMB	DATE: AUG 2017
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SCALE:	
HORIZ. VERT. NTS	SHEET NO. 13 OF 15

VERT: \_\_\_\_\_ SHEET: NO. \_\_\_\_\_ OF \_\_\_\_\_



Plot Date/Time : Mon, 07 Aug 2017 - 4:17pm  
 Path/Name : I:\Projek1\2423\1601P\ACAD\Production Drawings\13 EROSION CONTROL DETAILS 2 OF 2.dwg

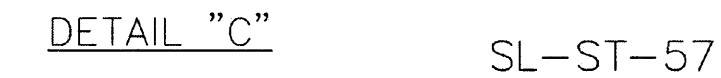
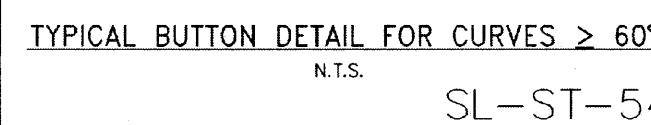
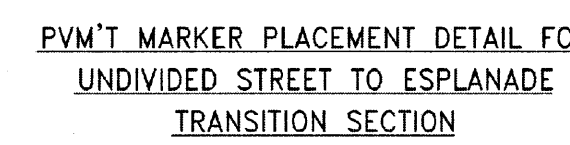
SL-ST-58

## SL-ST-58



1. ALL INTERSECTIONS WHERE A STOP SIGN IS LOCATED SHALL HAVE A STOP BAR. STOP BARS SHALL BE LOCATED WHERE PEDESTRIAN CROSSINGS ARE PROHIBITED.
2. STOP BARS SHALL BE 24" WIDE, AND CONSIST OF SOLID WHITE LINES EXTENDING ACROSS APPROACH LANES TO INDICATE THE POINT AT WHICH THE STOP IS INTENDED OR REQUIRED TO BE MADE.
3. ON APPROACH -- BEGINNING WITH STOP BAR, INSTALL A 4" WIDE SOLID WHITE LINE FOR STOP BAR, AND BACK FROM STOP BAR STOP 25' AND BEGIN NORMAL LANE LINES.
4. ON EXIT -- BEGINNING WITH CROSSWALK, OR 12' FROM CURB LINE OF INTERSECTING STREET, INSTALL A 4" WIDE SOLID WHITE LINE FOR 50 FT AND BEGIN NORMAL LANE LINE.
5. CROSSWALKS SHALL BE A MINIMUM INSIDE WIDTH OF 5' (12'). AT LOCATIONS WHERE ADDITIONAL VISIBILITY IS REQUIRED, WHERE TRAFFIC CONTROL DEVICES ARE NOT PRESENT, AND IN SCHOOL ZONES CONTINENTAL CROSSWALKS SHALL BE USED.
6. ALL PAVEMENT MARKINGS WITHIN CITY ROW SHALL BE MULTIPLEX/PAVEMENT (GRADES 65 AND ABOVE) IN ACCORDANCE WITH C.O.S.L. APPROVED PRODUCT LIST.
7. PAVEMENT MARKINGS MUST BE SHOWN ON THE APPROVED CONSTRUCTION PLANS. ALL PAVEMENT MARKINGS MUST BE RETRO-REFLECTIVE MATERIAL, APPLIED TO THE ROAD SURFACE IN A MANNER SPECIFIED BY THE CONTRACTOR. SUSPENDED EXISTENCE OR SPRAY MEANS, WITH A SURFACE APPLICATION OF GLASS BEADS.
8. THE COLOR OF RAISED PAVEMENT MARKERS UNDER BOTH DAYLIGHT AND NIGHTTIME CONDITIONS SHALL CONFORM TO THE COLOR OF THE MARKING FOR WHICH THEY SERVE AS A POSITIONING GUIDE OR AS A GUIDE TO THEIR SPACING.
9. ALL TRAFFIC BUTTONS AND MARKERS SHALL BE INSTALLED ADJACENT TO STRIPES (APPROX. 2').
10. ALL BUMPERS SHALL BE INSTALLED WITH AN APPROVED EPOXY.
11. A BLUE REFLECTORIZED BUTTON SET 6" OFF CENTERLINE OF ROADWAY SHALL BE INSTALLED ADJACENT TO ALL FIRE HYDRANTS.

SL-ST-53



- SL-ST-61


TEMPORARY BENCHMARK "B" ELEVATION - 67.12'  
BOX CUT ON A STORM INLET LOCATED ON THE  
SOUTH SIDE OF UNIVERSITY BLVD. APPROX. 180  
FEET EAST OF WEST AVALON DRIVE.. (AS SHOWN  
HEREON)

I HEREBY CERTIFY THAT THIS DRAWING REFLECTS THE IMPROVEMENTS CONSTRUCTED AS TO SIZE, LOCATION, AND GRADE; AND THAT THE CONSTRUCTION WAS IN SUBSTANTIAL COMPLIANCE WITH THE CONTRACT DOCUMENTS.

FORT BEND COUNTY ENGINEERING DEPARTMENT


DATE: 8/16/17

[illegible]

FORT BEND, TEXAS

## SHOPS IN RIVERSTONE

STRIPING DETAILS  
1 OF 2

**LJA Engineering, Inc.**   
2929 Briarpark Drive Phone 713.953.5200  
Suite 600 Fax 713.953.5026  
Houston, Texas 77042 FRN - F-1386

DA PROJECT NO.: 2423-1601P

DESIGNED BY: JRP	DRAWN BY: JRP/MMB	DATE: AUG 2017
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SCALE:		SHEET NO. 14 OF 15	
HORZ:	NTS		
VERT:			



Date/Time : Mon, 07 Aug 2017 - 4:17pm  
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SHOPS IN RIVERSTONE - JOB NO. 2423-1601P