



**REVIEW BY FORT BEND COUNTY
COMMISSIONERS COURT**

**Fort Bend County
Engineering Department**
301 Jackson Suite 401
Richmond, Texas 77469
281.633.7500
Permits@fortbendcountytexas.gov

☒ Right of Way Permit
☐ Commercial Driveway Permit

Permit No: 2017-14598

Applicant: G&A Boring Direccional/Costello, Inc.

Job Location Site: several streets in New Territory , Sugar Land, TX 77479

Bond No. **Date of Bond:** 5/8/2017 **Amount:** \$50,000.00

The above applicant came to make use of certain Fort Bend County property subject to, "The Order Regulating the Laying, Construction, Maintenance, and Repair of Buried Cables, Conduits, and Pole Lines, In, Under, Across or Along Roads, Streets, Highways, and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by the Commissioners Court of Fort Bend County, Texas, of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistent with Chapter 181, Vernon's Texas Statutes and Codes Annotated.

Notes:

1. Evidence of review by the Commissioners Court must be kept on the job site and failure to do so constitutes grounds for job shutdown.
2. Written notices are required:
 - a. 48 hours in advance of construction start up, and
 - b. When construction is completed and ready for final inspection, submit notification to Permit Administrator thru MyGovernmentOnline.org portal.
3. This permit expires one (1) year from date of permit if construction has not commenced.

On this 11th day of July, 2017, Upon Motion of Commissioner M. Myers, seconded by Commissioner M. Morales, duly put and carried, it is ORDERED, ADJUDGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

Signature

Presented to Commissioners Court and approved.

By: Charles O. Ay
for County Engineer

Date Recorded 7-17-2017 Comm. Court No. 19A

N/A

Clerk of Commissioners Court

By: _____
Drainage District Engineer/Manager

By: Andrea Willis
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@fortbendcountytexas.gov

- ☒ Right of Way Permit
☐ Commercial Driveway Permit

Permit No: 2017-14598

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:

- ☒ 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: [REDACTED] Amount: \$50,000.00
- ☐ Performance bond submitted. Bond No: _____ Amount: _____
- ☐ Cashier's Check Check No: _____ Amount: _____

(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):

Drainage District Approval

Date

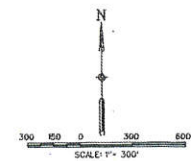
We have reviewed this project and agree it meets minimum requirements.

Charles O. Ay

Permit Administrator

6/30/17

Date

[illegible]

NOTES

1. SEE PLAN AND PROFILE SHEETS FOR GAS MAINS.
2. ALL RE-USED WATER LINES TO BE DETAILED BY THROUGLESS CONSTRUCTION UNLESS OTHERWISE NOTED.

Total Contract Amount: \$438,498.00
Total Line to be Installed: 15,708 LF
Cost per linear foot: \$27.92/LF
Total Line for Phase 2: 6,678 LF
Total Construction Cost for Phase 2: \$186,449.76

					DESIGNED BY: <i>QAM</i>
					DESIGN CHECKED BY: <i>JW</i>
					DRAWN BY: <i>QAM</i>
					CADD CHECKED BY:
					SURVEY CHECKED BY:
					QA/QC BY: <i>RS</i> DATE: <i>1-27-79</i>
					QA/QC REVISIONS BY: <i>QAM</i>
NO.		REVISION	DATE	BY	



Engineering and Surveying
9990 Richmond Avenue, Suite 450 N
Houston, Texas 77042
(713) 783-7788 (713) 783-3560, Fax
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

NEW TERRITORY
EAST HOMEWARD WAY
(RECLAIMED EFFLUENT) RE-USED WATER LINE

WATER LINE LAYOUT



APPROVED: *Moss*
DEVELOPMENT CONTINUATION
DATE: 12/16/16

SHEET 4

OF 36 SHEETS

JOB NO. 10992020-142

FORT BEND COUNTY LID 7

SHEET NO.	DESCRIPTION
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DETAIN AND INVESTIGATION SUMMARY

52. POLYMERIZATION PLANT LAYOUT

53. POLYMERIZATION PLANT DETAILS

54. BLENDED POLYMERIZATION DETAILS

55. ROCK ROSE "DIVE UP A BRANCH" FROM WYOMING-58

56. FURNITURE POLYMERIZATION CASES - PEO FILE

WYOMING LAND DETAILS

57. CONSTRUCTION NOTES 1-6-60

58. BYRON REVERE OUTWALL CONSTRUCTION DETAILS 01-46

59. BYRON REVERE INLET CONSTRUCTION DETAILS 01-47

60. BYRON LINK CONSTRUCTION DETAILS 01-48

61. WATER LINE CONSTRUCTION SUMMARY 01-49

62. WATER LINES PLANT/STATION DETAILS WALK THROUGH DETAILS 01-50

63. OPERATIONAL RECORDING CONSTRUCTION NOTES 01-50

64. RECORDING DETAIL 1 - 01-50

65. RECORDING CONTROL DETAIL 1 - 01-50



Costello



811
 Where's the business?
 Call before you dig

CONTACT 44-3875

CITY OF SUGAR LAND - ENGINEERING DEPT. 281-275-2768
F.B.C. M.U.D. No. 67 & (11) - OPERATOR - MUNICIPAL OPERATIONS & CONSULTING, INC. 281-367-9011
F.B.C. M.U.D. No. 67 & (11) - ENGINEER - COSTELLO, Inc. 713-783-7788
FORT BEND COUNTY DRAINAGE DISTRICT 281-342-2863

RE-USED WATER LINE CONSTRUCTION NOTES

- ALL RE-USED WATER LINES 2" TO 12" SHALL HAVE A MINIMUM OF 6" OF COVER FROM TOP OF CURB TO TOP OF PIPE AND 6" OF COVER FROM NATURAL GROUND TO BOTTOM OF PIPE. IF NO PAYMENT IS SHOWN TO BE COMPLETED, THERE IS OTHERWISE SHOWN TO BE COMPLETED. ALL RE-USED WATER LINES 16" OR GREATER SHALL HAVE A MINIMUM OF 9" COVER FROM NATURAL GROUND TO BOTTOM OF PIPE. IF NO PAYMENT IS SHOWN TO BE COMPLETED, THERE IS OTHERWISE SHOWN ON THE PLANS.
- RE-USED WATER MAIN FITTINGS SHALL BE SUPPORTED WITH CONCRETE THRUST BLOCKING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY OF THE THRUST BLOCKING AS TO PREVENT LATER MOVEMENT OF JOINT FITTINGS WHEN THE WATER MAIN IS PRESSURE TESTED AND PUT INTO OPERATION.
- ALL RE-USED WATER LINES 2" TO 12" SHALL BE PURPLE POLYVINYL CHLORIDE (PVC) CONFORMING TO AWWA C900 OR NEW DENSITY POLYETHYLENE (HDPE) WITH A MINIMUM OF 10% STRENGTH LOSS AFTER 10 YEARS. IF AN APPROVED SOLID JOINT PIPE IS USED, THE CONTRACTOR SHALL USE A PIPE SIZE LARGER THAN THE EXISTING PIPE. THE CONTRACTOR SHALL MAINTAIN THE SAME COVER AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAINTAIN THE SAME COVER AS SHOWN ON THE PLANS.
- | CALL OUT | PVC C-900 | HDPE C-900 |
|----------|-----------|------------|
| 1 | 2 | 3 |
| 2 | 4 | 4 |
| 3 | 4 | 4 |
| 4 | 8 | 8 |
| 5 | 8 | 10 |
| 6 | 14 | 16 |
| 7 | 14 | 16 |
| 8 | 16 | 18 |
| 9 | 16 | 18 |
4. THE CENTERLINE OF FLUSH VALVES ARE TO BE LOCATED 5' FROM THE BACK OF CURB WITH THE BASE OF FLUSHING VALVE TO BE 10" TO 20" ABOVE THE FINAL GRADE. THE OPERATOR SHALL BE REQUIRED TO MAINTAIN A MINIMUM OF 10" ABOVE THE FINAL GRADE. THE VALVE SHALL BE PAINTED PURPLE. WATER FLUSHED FROM THE SYSTEM SHALL BE EXCLUDED DIRECTLY INTO A SANITARY SEWER MANHOLE. NO DISCHARGE TO THE STREET SHALL BE ALLOWED.
- WHEREVER POSSIBLE, ALL MAIN LINE GATE VALVES ARE TO BE LOCATED OPPOSITE PAVING CURB RETURNS AS INDICATED.
- THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING GATE VALVES. CONTRACT THE OPERATOR SHALL BE REQUIRED TO MAINTAIN A MINIMUM OF 10" ABOVE THE FINAL GRADE. THE VALVE SHALL BE PAINTED PURPLE. WATER FLUSHED FROM THE SYSTEM SHALL BE EXCLUDED DIRECTLY INTO A SANITARY SEWER MANHOLE. NO DISCHARGE TO THE STREET SHALL BE ALLOWED.
- MAINTAIN A MINIMUM OF 9 FEET OF WALL TO WALL SEPARATION BETWEEN RE-USED WATER LINES AND POTABLE WATER LINES. MAINTAIN A MINIMUM OF 10 FEET OF WALL TO WALL SEPARATION BETWEEN RE-USED WATER LINES AND SANITARY SEWERS ON SANITARY SEWER MAIN LINES.
- AT LEAST ONE JOINT OF RE-USED WATER PIPE SHALL BE INSTALLED BETWEEN A GATE VALVE AND A PUGS OR JOINT DEAD-END LINE.
- FLUSH VALVES SHALL BE AMERICAN DARNING 5-1/2" B-6-8, HUBBLER SUPERIOR 5-1/2" B-6-8 OR EQUIVALENT. THE CONTRACTOR SHALL MAINTAIN THE SAME COVER AS SHOWN ON THE PLANS.
- RE-USED WATER LINES SHALL BE LOCATED 2 FEET BELOW POTABLE WATER LINES

1. ALL PUBLIC SIDEWALKS PARALLEL TO THE FRONT AND SIDE PROPERTY LINES SHALL BE FOUR FEET (4') IN WIDTH AND CONSTRUCTED OF CONCRETE, NOT LESS THAN FOUR INCHES (4") IN THICKNESS WITH TOOLED JOINTS LOCATED FIVE FEET (5') ON CENTER AND 1" W/ REDWOOD EXPANSION JOINTS WITH 5"x12" REBAR ON 12" CENTERS.
2. SIDEWALKS SHALL BE STANDARD BROOM FINISH CONCRETE WITH A FOUR INCH (4") SMOOTH "PICTURE FRAME" BORDER AROUND EACH 5'x6'0" SECTION.
3. SIDEWALKS ACROSS THE FRONT PROPERTY LINE [AND SIDE PROPERTY LINE ON CORNER LOTS] SHALL BE LOCATED WITHIN THE RIGHT-OF-WAY, SIX INCHES (6") FROM THE PROPERTY LINE.

CAUTION: UNDERGROUND GAS FACILITIES

LOCATION OF CENTERPOINT ENERGY MAIN LINES (TO INCLUDE CENTERPOINT ENERGY WYKATASKA PIPELINE, LLC, WHERE APPLICABLE) ARE SHOWN ON AN ATTACHED MAP. THE SERVICE AREA FOR THE PROJECT IS SHOWN ON THE SIGNATURE ON THESE LINES ONLY. INDICATES THAT OUR FACILITIES ARE SHOWN IN APPROXIMATE LOCATION. IT DOES NOT IMPLY THAT A CONFIRMATION ANALYSIS HAS BEEN MADE. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT 1-800-545-6005 OR 811 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.

WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (713) 945-8036 OR (713) 967-8037 (7:00 am to 4:30 pm) FOR STATUS OF LINE LOCATION. REQUEST RECORDS BY CALLING 1-800-455-4555.

WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF CENTER-POINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.

WHEN CENTERPOINT ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.

FOR EMERGENCIES REGARDING GAS LINES CALL (713) 659-3552 OR (713) 267-4200.
THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS

FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.

WARNING: OVERHEAD ELECTRICAL LINES

OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE LOCATION OF OVERHEAD LINES HAS NOT BEEN SHOWN ON THESE DRAWINGS AS THE LINES ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE FORBIDS ACTIVITIES THAT OCCUR IN CLOSE PROXIMITY TO HIGH VOLTAGE LINES, SPECIFICALLY:

ANY ACTIVITY WHERE PERSONS OR THINGS MAY COME WITHIN SIX (6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES; AND

OPERATING A CRANE, DERRICK, POWER SHOVEL, DRILLING RIG, PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN 10 FEET OF LIVE OVERHEAD HIGH-VOLTAGE LINES.

PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THE LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL CENTERPOINT ENERGY AT (713) 267-2222.

ACTIVITIES IN OR ACROSS CENTRICITY ENERGY BUT ON EASEMENT PROPERTY

NO APPROVAL TO USE, CROSS OR OCCUPY CENTERPOINT FEE OR EASEMENT PROPERTY IS GIVEN. IF YOU NEED TO USE CENTERPOINT ENERGY PROPERTY, PLEASE CONTACT OUR SURVEYING & RIGHT OF WAY DIVISION AT (713) 207-6348 OR (713) 207-5769.

FORT BEND COUNTY

CONSTRUCTION-GENERAL NOTES

1. **FORT BEND COUNTY MUST BE INVITED TO THE PRE-CONSTRUCTION MEETING.**
2. **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@FORTBENDCOUNTYTX.GOV.**
3. **CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FROM FORT BEND COUNTY PRIOR TO COMMENCING CONSTRUCTION OF ANY IMPROVEMENTS WITHIN COUNTY ROAD RIGHT OF WAYS.**
4. **ALL PAVING IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FORT BEND COUNTY "RULES, REGULATIONS AND REQUIREMENTS RELATING TO THE APPROVAL AND ACCEPTANCE OF IMPROVEMENTS IN SUBDIVISIONS AS CURRENTLY AMENDED."**
5. **ALL ROAD WIDTHS, CURBS, RADIUS AND CURB ALIGNMENT SHOWN INDICATES BACK OF CURB**
6. **A CONTINUOUS LONGITUDINAL REINFORCING BAR SHALL BE USED IN THE CURBS.**
7. **ALL CONCRETE PAVEMENT SHALL BE 8" BAY CEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3600 PSI/28 DAYS. TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT EACH CURB RETURN AND AT A MAXIMUM SPACING OF 60 FEET.**
8. **ALL WEATHER ACCESS TO ALL EXISTING STREETS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.**
9. **4" X 12" REINFORCED CONCRETE CURB SHALL BE PLACED IN FRONT OF SINGLE FAMILY LOTS ONLY. ALL OTHER AREAS SHALL BE REINFORCED CONCRETE CURB.**
10. **AT ALL INTERSECTION LOCATIONS, TYPE 7 RAMPS SHALL BE PLACED IN ACCORDANCE WITH TEXAS TRUST FUND STANDARD DETAIL SHEET A.D.A. - HANDCAP RAMPS SHALL BE INSTALLED WITH STREET PAVING AT ALL INTERSECTIONS AND COMPLY WITH CURRENT A.D.A. REGULATIONS.**
11. **CURB HEADERS ARE REQUIRED AT CURB CONNECTIONS TO HANDCAP RAMPS, WITH NO CONSTRUCTION JOINT WITHIN 5' OF RAMP.**
12. **ALL INTERSECTIONS UTILIZING TRAFFIC CONTROL, GUARDRAIL SHALL HAVE A.D.A. WHEEL CHAIR RAMPS INSTALLED.**
13. **GUIDELINES ARE SET FORTH IN THE TEXAS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", AS CURRENTLY AMENDED, SHALL BE OBSERVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAGMAN, SIGNS, STOPPING AND GOING SIGNS, ETC., DURING CONSTRUCTION - BOTH DAY AND NIGHT.**
14. **ALL R1-1 STOP SIGNS SHALL BE 30"X30" WITH DIAMOND GRADE SHEETING PER TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.**
15. **REFLECTIVE NAME SIGNAGE SHALL BE ON A 10" HIGH SIGN FLAT BLADE REFLECTIVE ORANGE BACKGROUND. STREET NAMES SHALL BE UPPER AND LOWERCASE LETTERS OF 4" MINIMUM. THE LETTERS SHALL BE REFLECTIVE WHITE. STREET NAME SIGNS SHALL BE MOUNTED ON STOP SIGN SIZES.**
16. **A BLUE/ODOR FLUORESCENT BUTTON SHALL BE PLACED AT 12 INCHES OFF OF THE CENTERLINE OF THE STREET ON THE SAME SIDE AS THE DRIVEWAY.**



NEW TERRITORY
EAST HOMEWARD WAY
(RECLAIMED EFFLUENT) RE-USED WATER LINE

CONSTRUCTION NOTES



SHEET 2

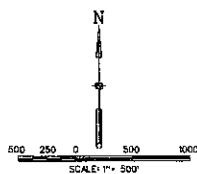
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36

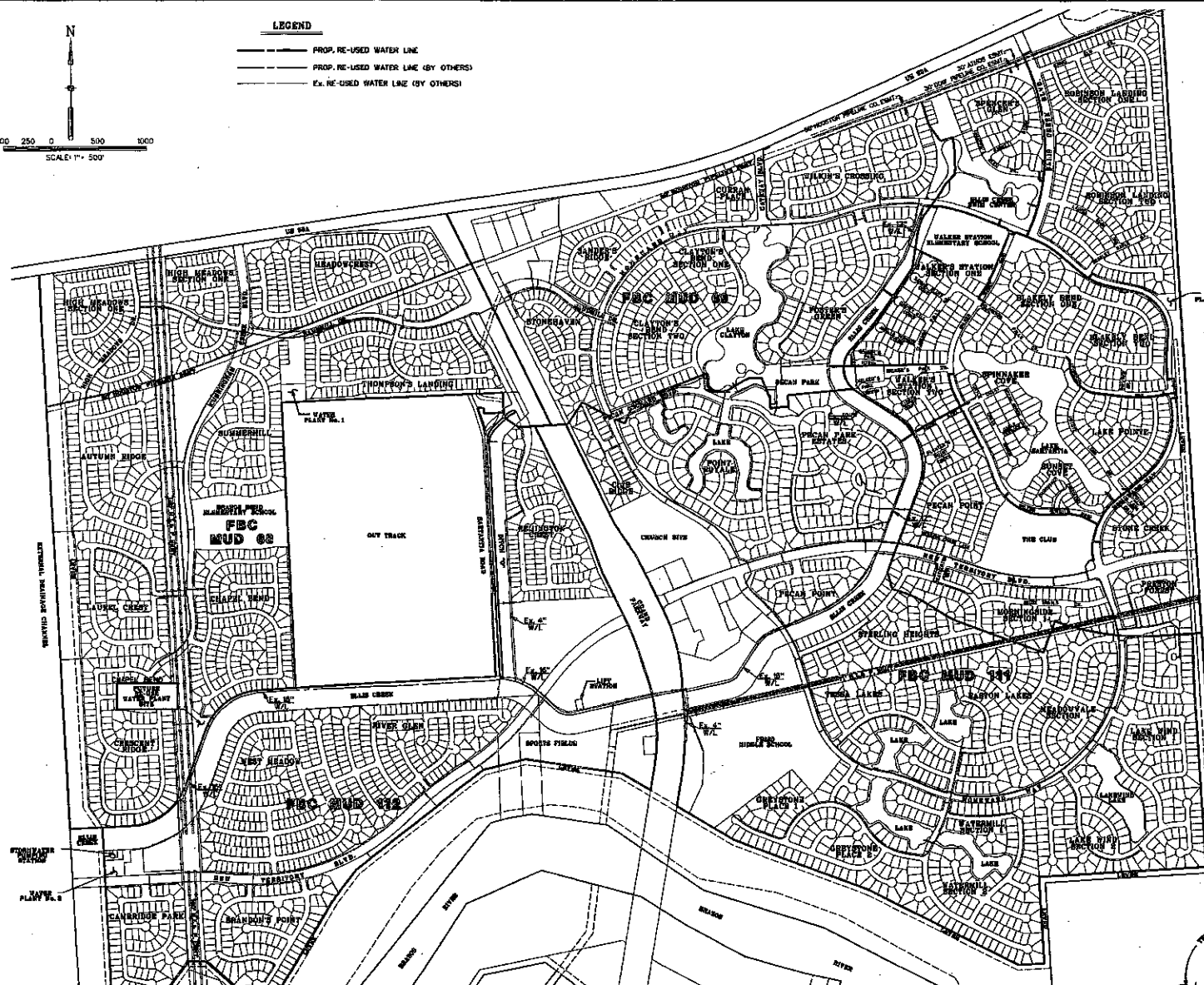
OF 30 SHEETS

JOB NO. 10092020-142



LEGEND

- PROP. RE-USED WATER LINE
- PROP. RE-USED WATER LINE (BY OTHERS)
- EX. RE-USED WATER LINE (BY OTHERS)



CONTRACT REQUIREMENTS
 THESE PLANS ARE FOR THE RECLAIMED EFFLUENT RE-USED WATER LINE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES.



- EX. OVERHEAD POWER
- EX. UNDERGROUND ELECTRICAL
- EX. GAS LINE

DESIGNED BY: <i>Q.L.L.</i>	DATE: <i>12/11/16</i>
DRAWN BY: <i>Q.L.L.</i>	
CHECKED BY: <i>Q.L.L.</i>	
SURVEY CHECKED BY: <i>Q.L.L.</i>	
QA/QC BY: <i>Q.L.L.</i>	
QA/QC REVISION BY: <i>Q.L.L.</i>	



Engineering and Surveying
 9890 Richmond Avenue, Suite 450 N
 Houston, Texas 77042
 (713) 783-7758 (713) 783-3580, Fax
 TBP'S FIRM REG. No. 280
 TBP'S FIRM REG. No. 101468

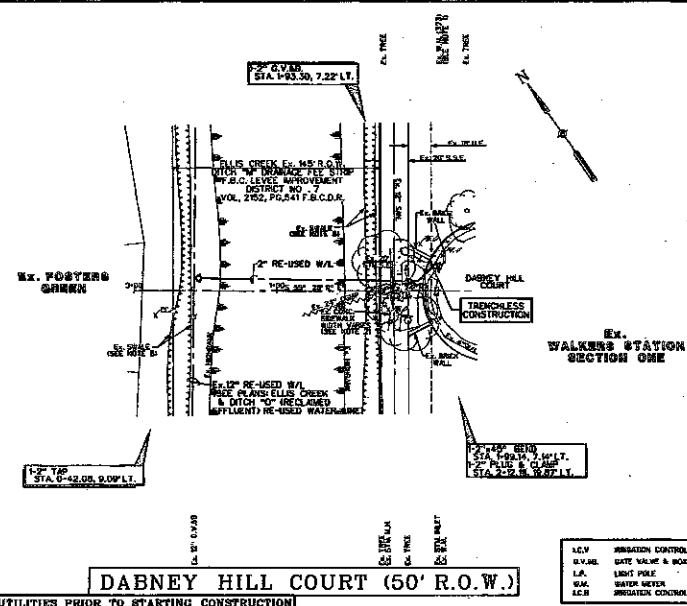
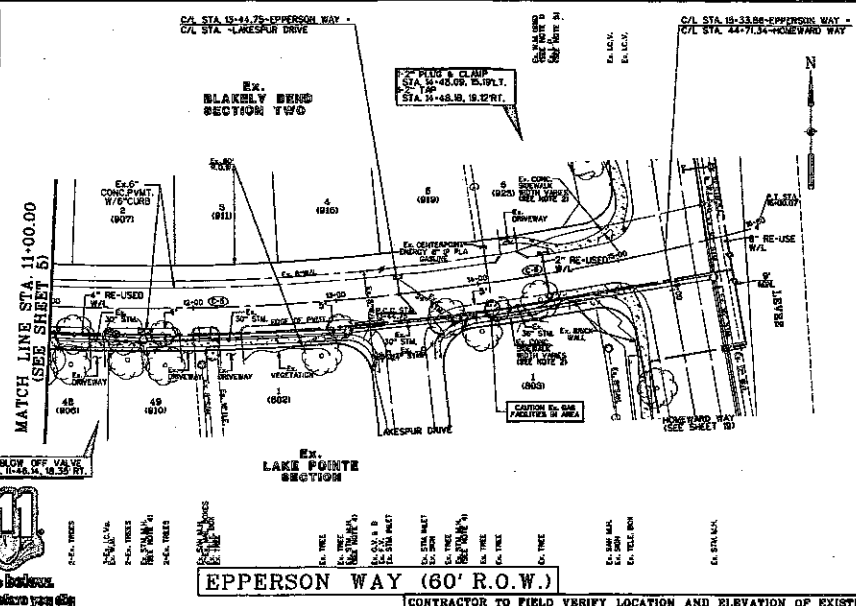
NEW TERRITORY
 EAST HOMEWARD WAY
 (RECLAIMED EFFLUENT RE-USED WATER LINE)

OVERALL LAYOUT

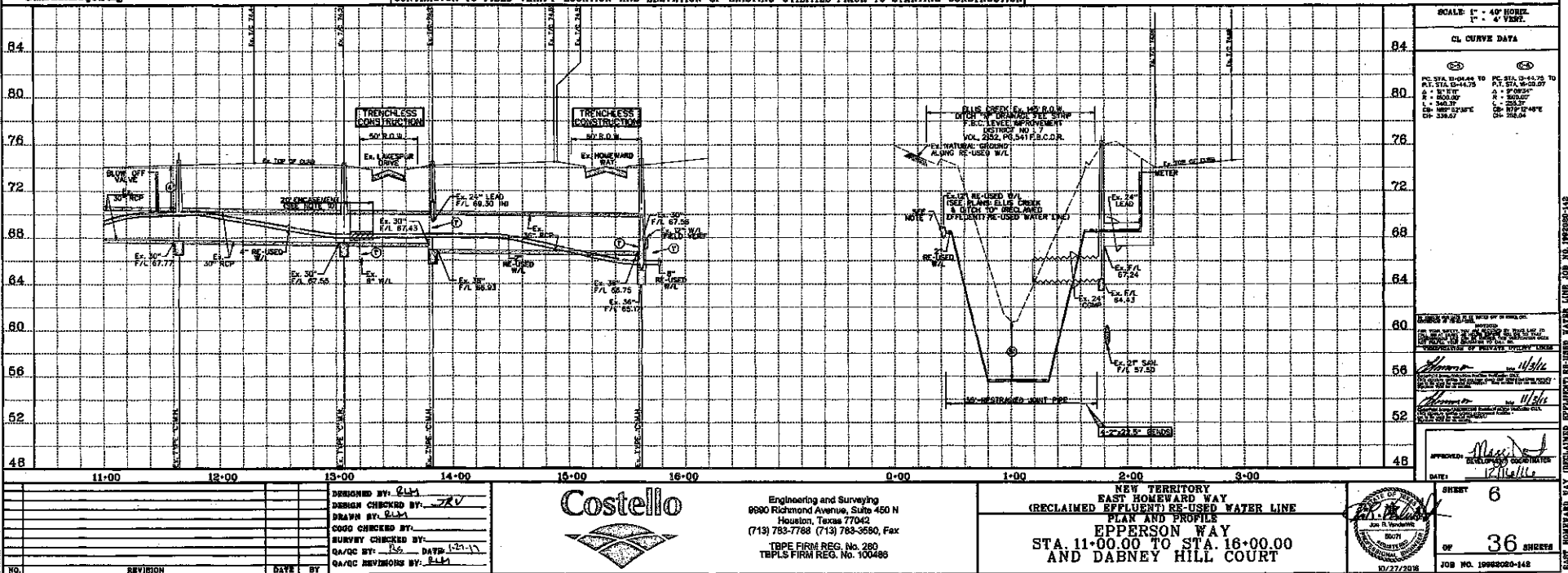


SHEET **3**
 OF **36** SHEETS
 JOB NO. 19992080-148
 10/27/2016

NO. REVISION DATE BY



- NOTES**
- CONTRACTOR SHALL LOCATE APPROPRIATELY WITHIN THE CONTRACT AREA, ALL EXISTING UTILITIES AND RECORD THEM ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WATER METER CONNECTION POINT.
 - REMOVE AND RE-USE EX. CONCRETE SEWER AS REFERRED TO CONSTRUCTION FROM RE-USED WATER LINE.
 - CONSTRUCTION SHALL MAINTAIN A MINIMUM 4' CLEARANCE TO EX. HORIZONTAL SEPARATION FOR SANITARY SEWER LINES AND MANHOLES.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 4' CLEARANCE TO EX. HORIZONTAL SEPARATION FOR STORM SEWER LINES AND MANHOLES.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 4' CLEARANCE TO EX. HORIZONTAL SEPARATION FOR GAS LINES AND MANHOLES.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 4' CLEARANCE TO EX. HORIZONTAL SEPARATION FOR ALL OTHER UTILITIES.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 4' CLEARANCE TO EX. HORIZONTAL SEPARATION FOR ALL OTHER UTILITIES.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 4' CLEARANCE TO EX. HORIZONTAL SEPARATION FOR ALL OTHER UTILITIES.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 4' CLEARANCE TO EX. HORIZONTAL SEPARATION FOR ALL OTHER UTILITIES.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 4' CLEARANCE TO EX. HORIZONTAL SEPARATION FOR ALL OTHER UTILITIES.
- LEGEND**
- ① INDICATES MIN. VERTICAL CLEARANCE
 - ② INDICATES MIN. VERTICAL CLEARANCE
 - ③ INDICATES MIN. VERTICAL CLEARANCE
 - ④ INDICATES RE-USED WATER LINE
 - ⑤ INDICATES RE-USED WATER METER
 - ⑥ INDICATES RE-USED WATER METER
 - ⑦ INDICATES RE-USED WATER METER
 - ⑧ INDICATES RE-USED WATER METER
 - ⑨ INDICATES RE-USED WATER METER
 - ⑩ INDICATES RE-USED WATER METER
- KEY**
- LEG. SEWERAGE CONTROL VALVE
 - LEG. DATE VALVE & BOX
 - LEG. LIGHT POLE
 - LEG. WATER METER
 - LEG. SEWERAGE CONTROL BOX



NO.	REVISION	DATE	BY
1	DESIGNED BY: JLV		
2	DRAWN BY: JLV		
3	CHECKED BY: JLV		
4	SURVEY CHECKED BY: JLV		
5	QA/QC BY: JLV		
6	QA/QC REVISIONS BY: JLV		

Costello

Engineering and Surveying
8800 Richmond Avenue, Suite 450 N
Houston, Texas 77042
(713) 785-7768 (713) 785-3590, Fax
TPE FIRM REG. No. 280
TEPLS FIRM REG. No. 100485

NEW TERRITORY
EAST HOMEWARD WAY
(RECLAIMED EFFLUENT) RE-USED WATER LINE
PLAN AND PROFILE
EPPERSON WAY
STA. 11+00.00 TO STA. 16+00.00
AND DABNEY HILL COURT

APPROVED: *[Signature]*
DATE: 12/27/2018

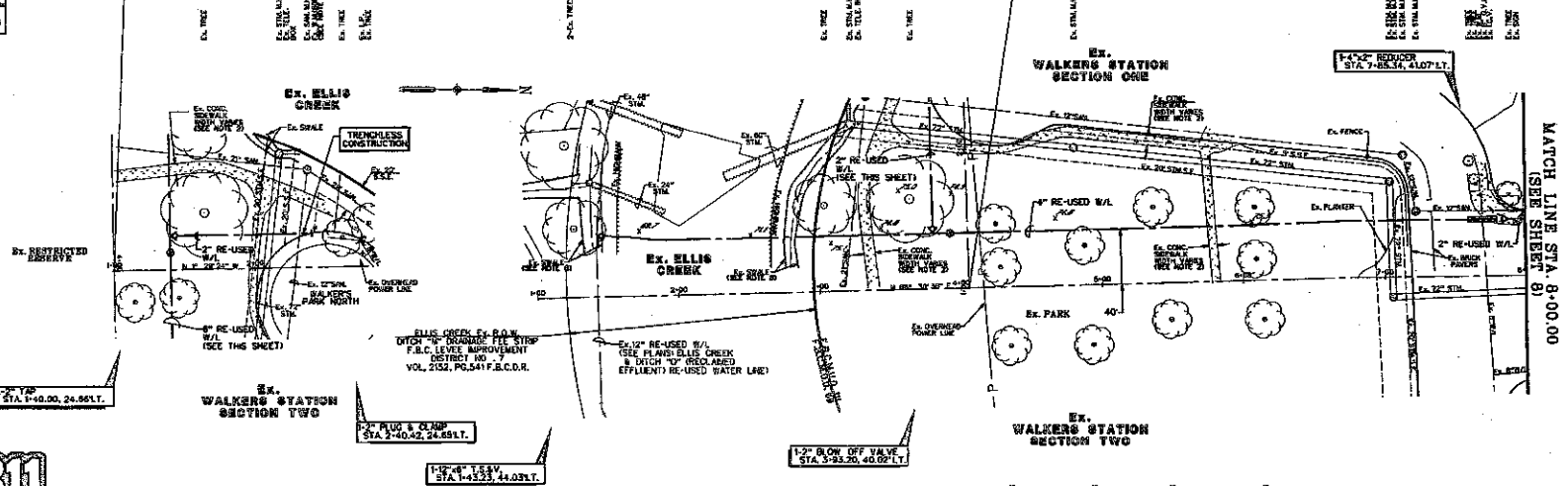
SHEET 6 OF 36 SHEETS

JOB NO. 19980202-145



C/L STA 1+00.00-RE-USED WATER LINE "A"
C/L STA 4+00.00-WALKER'S PARK DRIVE

C/L STA 4+00.00-WALKER'S PARK DRIVE
C/L STA 1+00.00-RE-USED WATER LINE "A"



- CONTRACTOR'S NOTES**
- CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. WATER UTILITIES SHALL BE LOCATED BY THE CONTRACTOR'S FIELD COUNSEL WITH THE EIGHTH WARD & THE CITY OF HOUSTON TO DETERMINE THE WATER METER CONNECTION POINT.
 - REPAIRS AND REPLACEMENTS TO EXISTING UTILITIES SHALL BE MADE TO MAINTAIN THE WATER METER CONNECTION LINE.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 5'-0\"/>
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 5'-0\"/>
 - CONTRACTOR SHALL BE AWARE OF SHALLOW CONDUITS BETWEEN EX. UTILITIES. CONTRACTOR SHALL EXERCISE CAUTION.
 - CONTRACTOR SHALL EXPOSE EX. 12\"/>
 - CONTRACTOR SHALL MAINTAIN EX. 12\"/>
 - SEE DETAILS IN WA-18 AND SL-18-15 ON SHEET 3A.
- LEGEND**
- ① INDICATES MIN. VERTICAL CLEARANCE
 - ② INDICATES MIN. VERTICAL CLEARANCE
 - ③ INDICATES MIN. VERTICAL CLEARANCE
 - (272) INDICATES RE-USED WATER LINE (SEE THIS SHEET)
 - ⊕ INDICATES WATER METER SERVICE METER
 - ⊕ INDICATES 12\"/>
 - 47 INDICATES STREET ADDRESS
 - 1800 INDICATES STREET ADDRESS
 - C— EX. CONCRETE CABLE
 - P— EX. OVERHEAD POWER
 - E— EX. UNDERGROUND ELECTRICAL
 - G— EX. GAS LINE
 - H— EX. HIGH BANK
- SCHEMATIC**
- SCV IRRIGATION CONTROL VALVE
 - C.V.M. DATE VALVE & BOX
 - L.P. LIGHT POLE
 - W.M. WATER METER
 - I.C.B. IRRIGATION CONTROL BOX

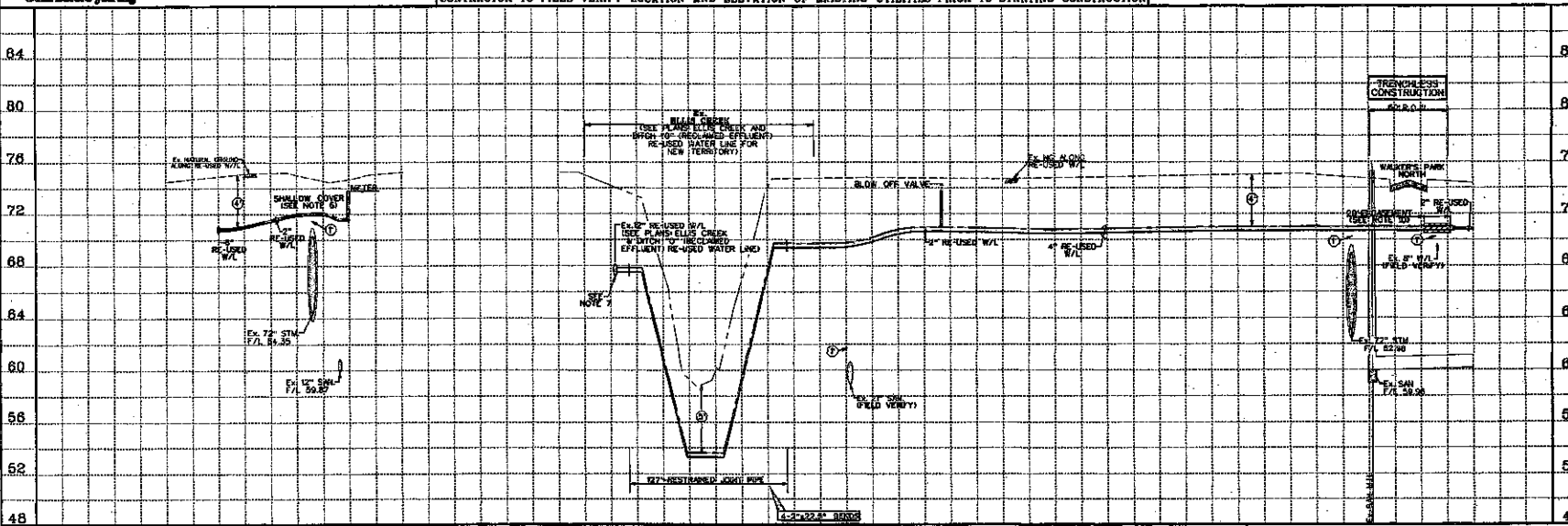


811
Call before you dig

RE-USED WATER LINE "A"

WALKER'S PARK DR. (R.O.W. VARIES)

CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION



SCALE: 1" = 40' HORIZ.
1" = 4' VERT.

CL CURVE DATA

1. NAME OF PROJECT: _____

2. OWNER: _____

3. LOCATION: _____

4. DATE: _____

5. DRAWN BY: _____

6. CHECKED BY: _____

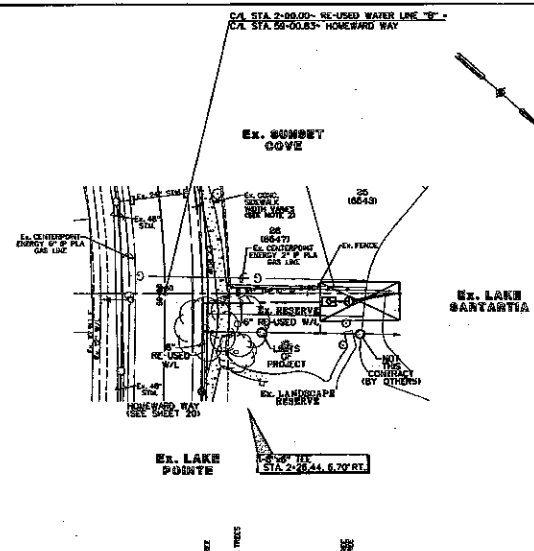
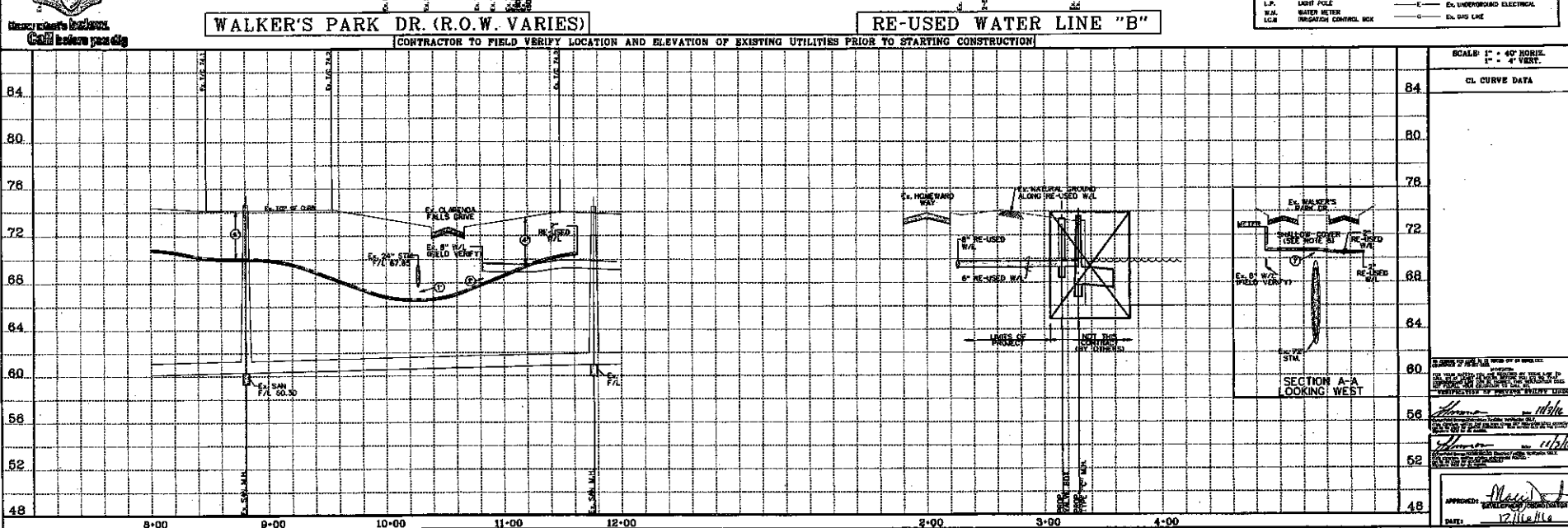
7. APPROVED BY: _____

8. _____

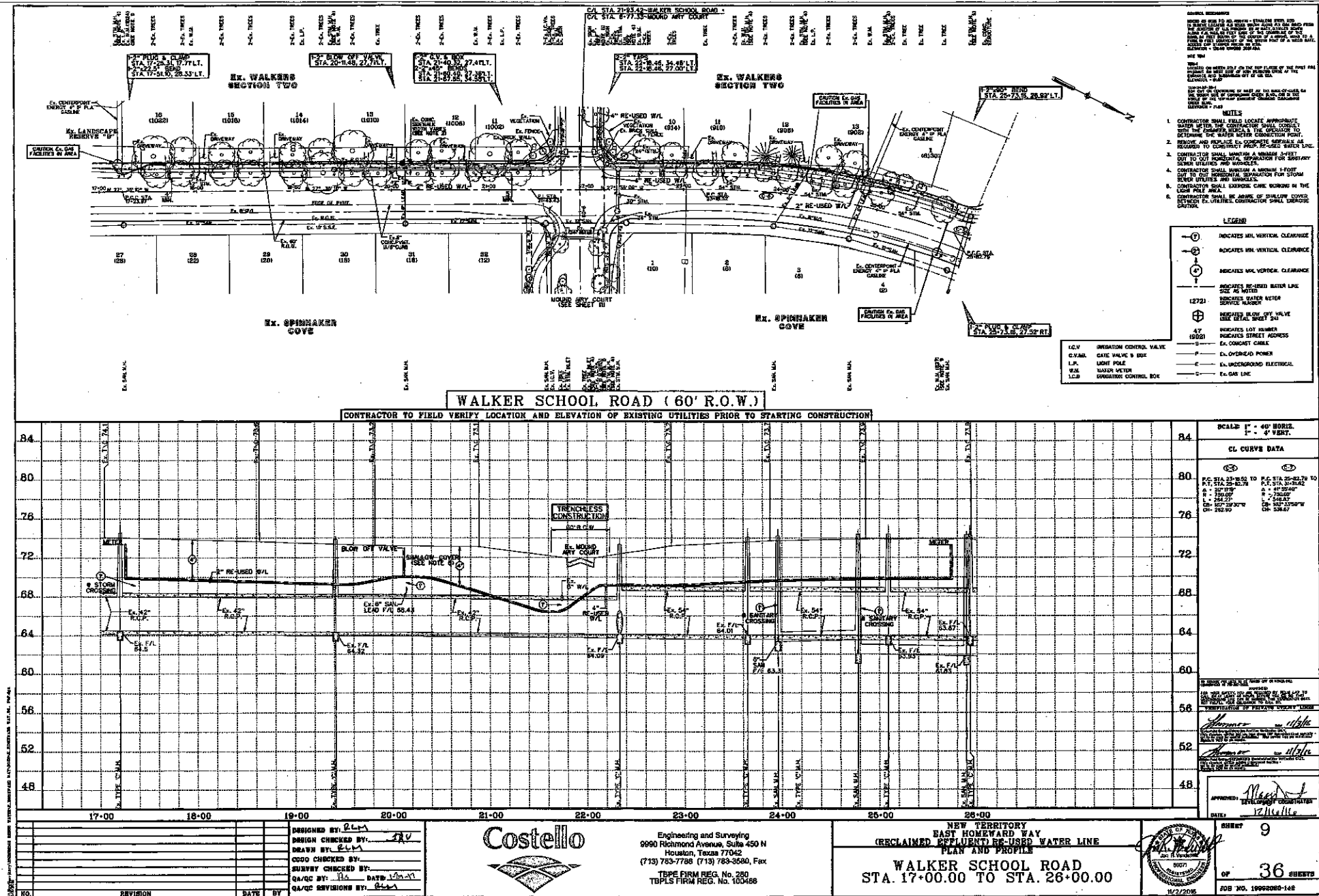
9. _____

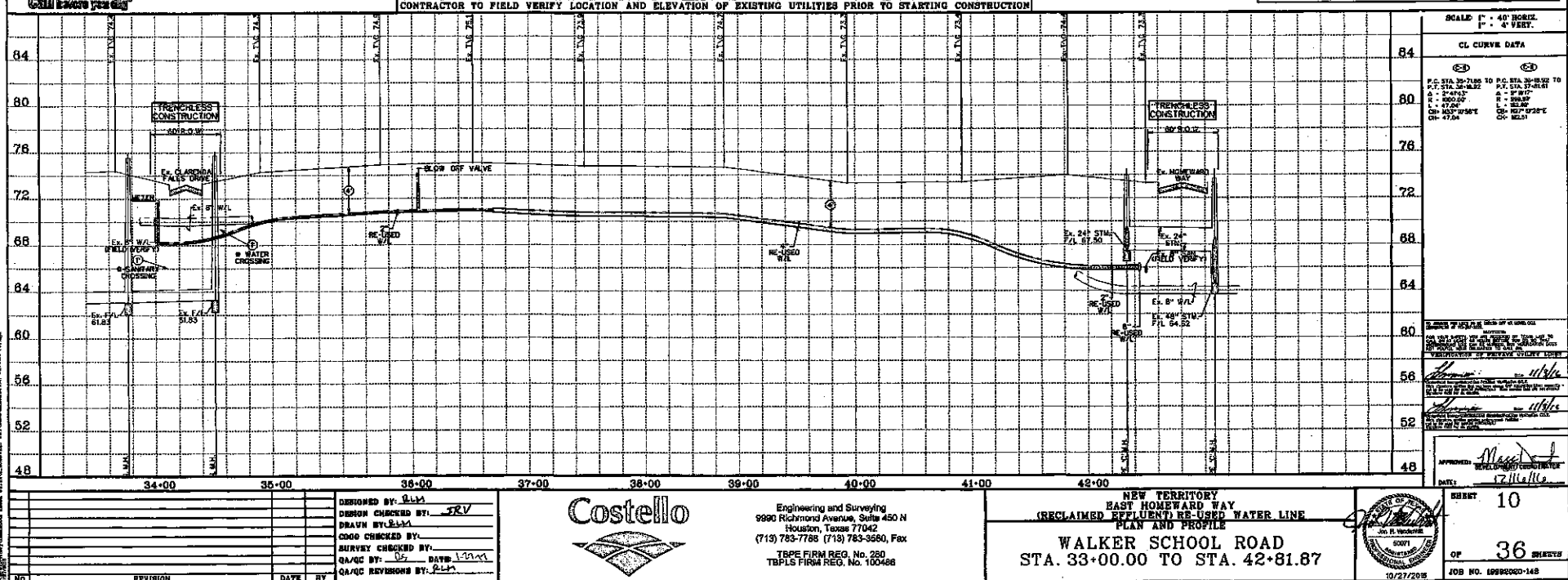
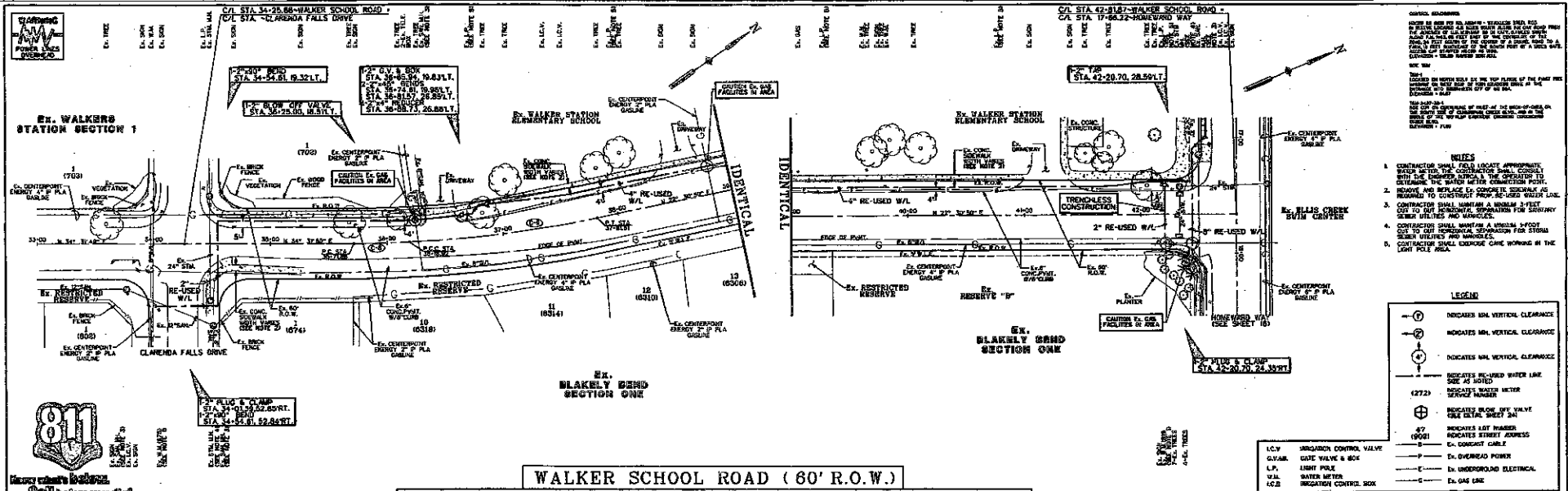
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11. _____

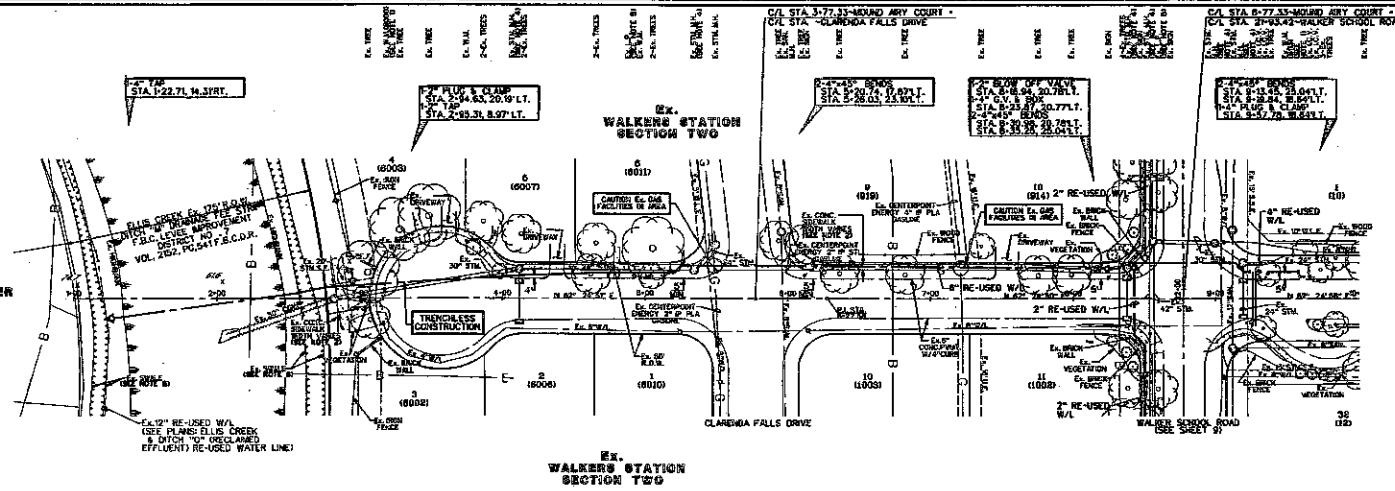
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				DESIGNED BY: <u>ELM</u>				<div>Costello</div> <div></div> <div>Engineering and Surveying 6690 Richmond Avenue, Suite 450 N Houston, Texas 77042 (713) 763-7766 (713) 763-3580, Fax</div>				<div>NEW TERRITORY EAST HOMEWARD WAY (RECLAIMED EFFLUENT) RE-USED WATER LINE PLAN AND PROFILE WALKER'S PARK DR. STA. 8+00.00 TO STA. 12+00.00 AND RE-USED WATER LINE "B"</div> <div></div> <div>SHEET 8 OF 36 SHEETS JOB NO. 10996000-142</div>			
				DESIGN CHECKED BY: <u>TRV</u>											
				DRAWN BY: <u>ELM</u>											
				CODE CHECKED BY: _____											
				SURVEY CHECKED BY: _____											
				QA/QC BY: <u>ES</u> DATE: <u>10-2-00</u>											
				QA/QC REVISIONS BY: <u>ELM</u>											
NO. _____				REVISION _____				DATE BY _____							





DESIGNED BY: <i>RLM</i> DRAWN BY: <i>RLM</i> CHECKED BY: <i>RLM</i> DATE: <i>1/11/11</i>		Costello Engineering and Surveying 9990 Richmond Avenue, Suite 450 N Houston, Texas 77042 (713) 783-7788 (713) 783-3560, Fax TYPE FIRM REG. No. 280 TPLS FIRM REG. No. 100468		NEW TERRITORY EAST HOMEWARD WAY (RECLAIMED EFFLUENT) RE-USED WATER LINE PLAN AND PROFILE WALKER SCHOOL ROAD STA. 33+00.00 TO STA. 42+81.87 12/27/2010		SHEET 10 OF 36 SHEETS JOB NO. 10992020-148
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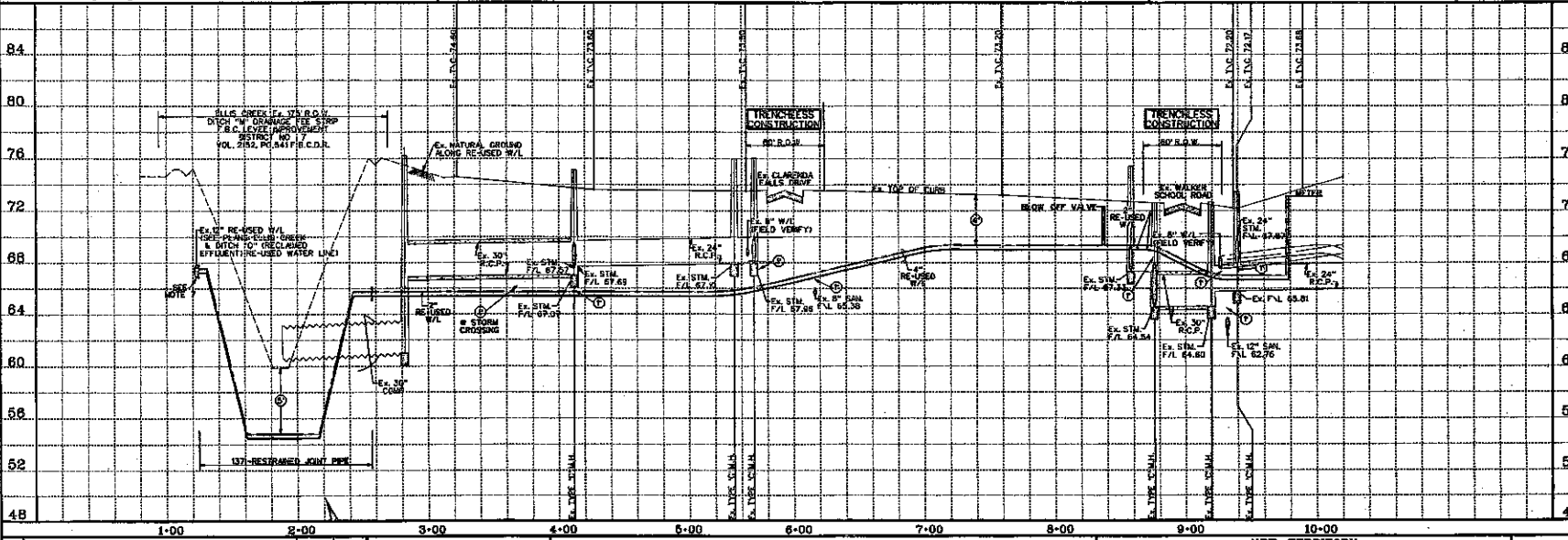


- NOTES**
- CONTRACTOR SHALL FIELD LOCATE APPROXIMATELY 10' DEEP IN THE EXISTING WATER LINE, WITHIN THE EXISTING WATER LINE, AND VERIFY THE EXISTING WATER LINE DEPTH AND LOCATION. THE CONTRACTOR SHALL MAINTAIN A MINIMUM 5' CLEARANCE FROM THE EXISTING WATER LINE. THE CONTRACTOR SHALL MAINTAIN A MINIMUM 5' CLEARANCE FROM THE EXISTING WATER LINE. THE CONTRACTOR SHALL MAINTAIN A MINIMUM 5' CLEARANCE FROM THE EXISTING WATER LINE.
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- LEGEND**
- INDICATES MIN. VERTICAL CLEARANCE
 - INDICATES MAX. VERTICAL CLEARANCE
 - INDICATES MIN. VERTICAL CLEARANCE
 - INDICATES RE-USED WATER LINE
 - INDICATES WATER METER
 - INDICATES BLOW OFF VALVE
 - INDICATES LOT NUMBER
 - INDICATES STREET ADDRESS
 - INDICATES CABLE
 - INDICATES OVERHEAD POWER
 - INDICATES UNDERGROUND ELECTRICAL
 - INDICATES GAS LINE
 - INDICATES HIGH MOUNT



MOUND AIRY COURT (50' R.O.W.)

CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION



SCALE: 1" = 40' HORIZ. 1" = 4' VERT.

CL. CURVE DATA

STATION	CL. CURVE DATA
1+00	CL. CURVE DATA
2+00	CL. CURVE DATA
3+00	CL. CURVE DATA
4+00	CL. CURVE DATA
5+00	CL. CURVE DATA
6+00	CL. CURVE DATA
7+00	CL. CURVE DATA
8+00	CL. CURVE DATA
9+00	CL. CURVE DATA
10+00	CL. CURVE DATA

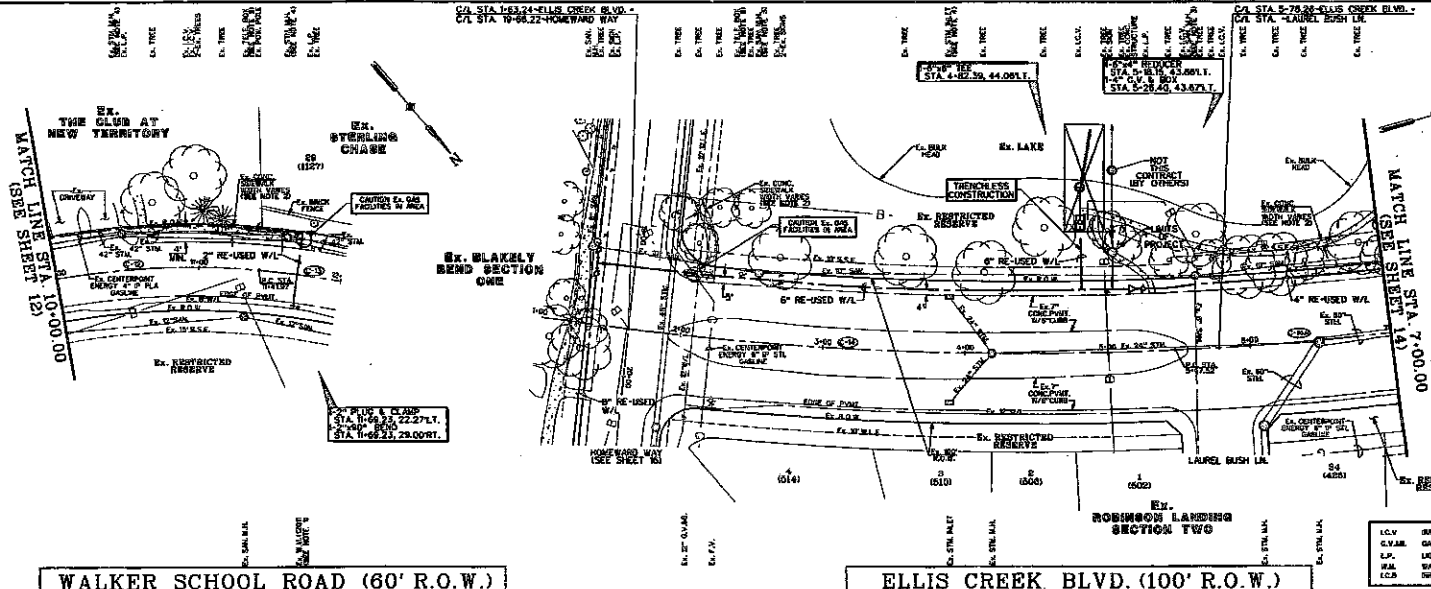
NO.	REVISION	DATE	BY
1	DESIGNED BY: RLM		
2	DRAWN BY: RLM		
3	CHECKED BY: RLM		
4	SURVEY CHECKED BY: RLM		
5	QA/QC BY: RLM		
6	QA/QC REVISIONS BY: RLM		



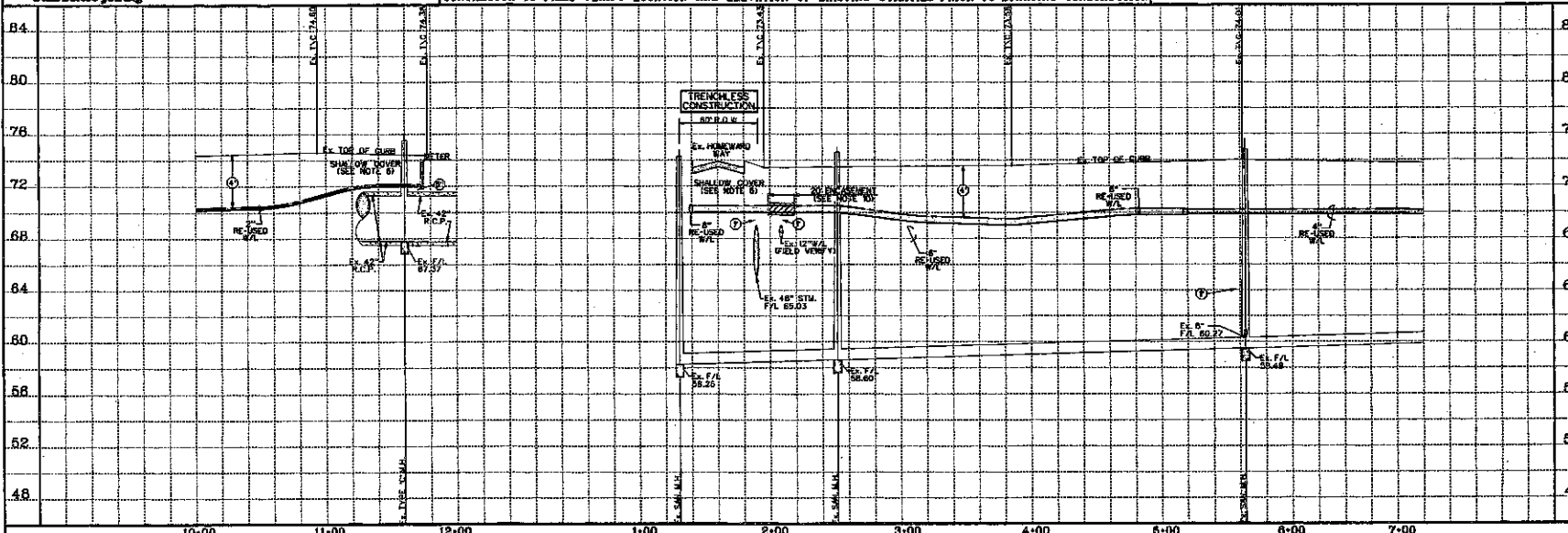
Engineering and Surveying
9980 Richmond Avenue, Suite 450 N
Houston, Texas 77042
(713) 783-7788 (713) 783-3580, Fax
TPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

**NEW TERRITORY EAST HOMEWARD WAY
(RECLAIMED EFFLUENT RE-USED WATER LINE
PLAN AND PROFILE)**

APPROVED: *[Signature]*
DATE: 12/11/10
SHEET 11
OF 36 SHEETS
JOB NO. 1999280-148
10/27/2018



- NOTES**
- CONTRACTOR SHALL FIELD LOCATE APPROPRIATE WATER METER LOCATIONS AND PROVIDE THE WATER METER CONNECTION POINTS.
 - REMOVE AND REPLACE EX. CONCRETE CURB AND GUTTER TO MATCH NEW RE-USED WATER LINE.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 3' VERT. CLEARANCE OVER THE WATER METER CONNECTION POINTS.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 3' VERT. CLEARANCE OVER THE WATER METER CONNECTION POINTS.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 3' VERT. CLEARANCE OVER THE WATER METER CONNECTION POINTS.
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 - CONTRACTOR SHALL MAINTAIN A MINIMUM 3' VERT. CLEARANCE OVER THE WATER METER CONNECTION POINTS.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 3' VERT. CLEARANCE OVER THE WATER METER CONNECTION POINTS.
- LEGEND**
- INDICATES 1" - 4" HORIZ. CLEARANCE
 - INDICATES 1" - 4" VERT. CLEARANCE
 - INDICATES 1" - 4" HORIZ. CLEARANCE
 - INDICATES 1" - 4" VERT. CLEARANCE
 - INDICATES 1" - 4" HORIZ. CLEARANCE
 - INDICATES 1" - 4" VERT. CLEARANCE
 - INDICATES 1" - 4" HORIZ. CLEARANCE
 - INDICATES 1" - 4" VERT. CLEARANCE
 - INDICATES 1" - 4" HORIZ. CLEARANCE
 - INDICATES 1" - 4" VERT. CLEARANCE



CL. CURVE DATA
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DESIGNED BY	RAH
DESIGN CHECKED BY	TRV
DRAWN BY	RAH
CHECKED BY	RAH
SURVEY CHECKED BY	RAH
QA/QC CHECKED BY	RAH
QA/QC REVISIONS BY	RAH

Costello

Engineering and Surveying
9990 Richmond Avenue, Suite 450 N
Houston, Texas 77042
(713) 783-7788 (713) 783-3560, Fax
TPE FIRM REG. No. 280
TBL FIRM REG. No. 100485

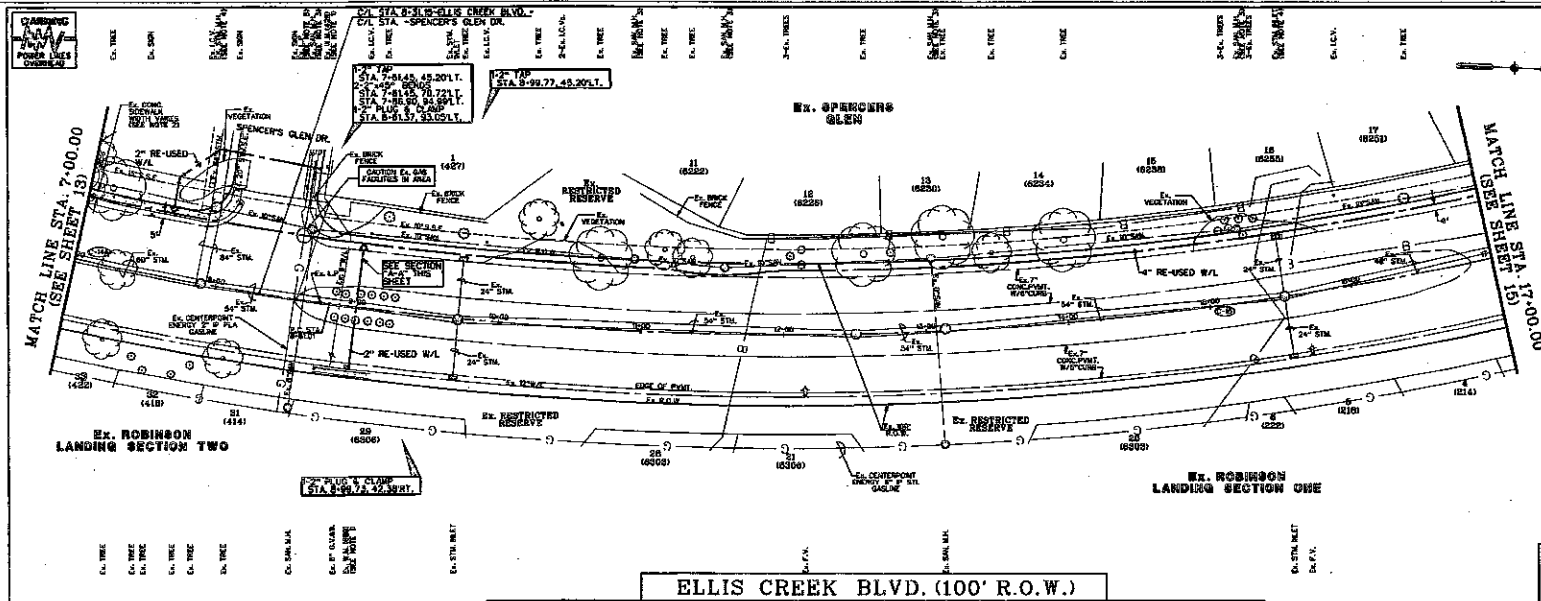
NEW TERRITORY EAST HONORWAY WAY (RECLAIMED EFFLUENT) RE-USED WATER LINE PLAN AND PROFILE

WALKER SCHOOL ROAD STA. 10+00.00 TO STA. 12+00.00 AND ELLIS CREEK BLVD. STA. 1+00.00 TO STA. 7+00.00

DATE: 12/11/11

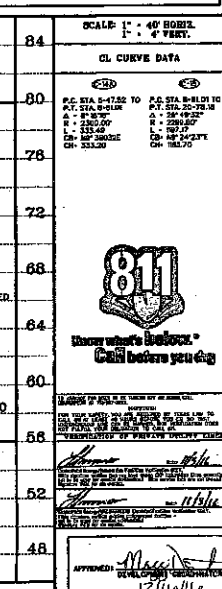
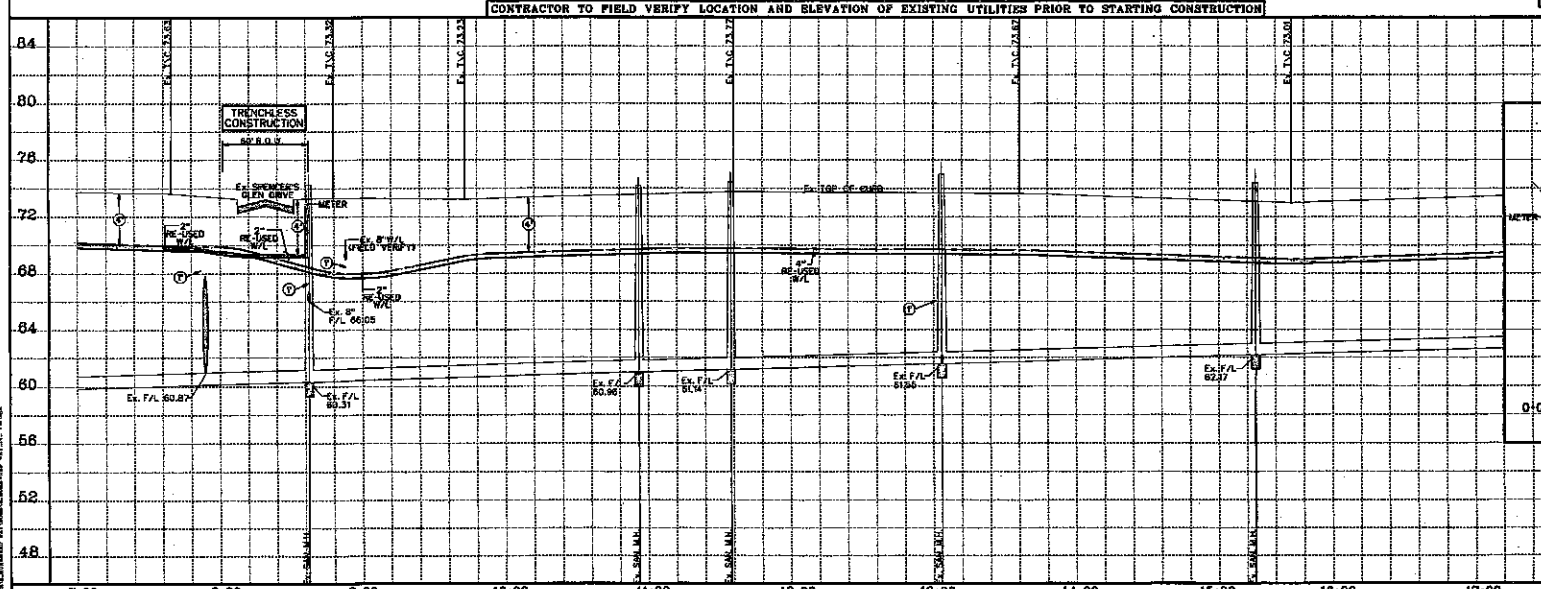
SHEET 13 OF 36 SHEETS

JOB NO. 19990600-142

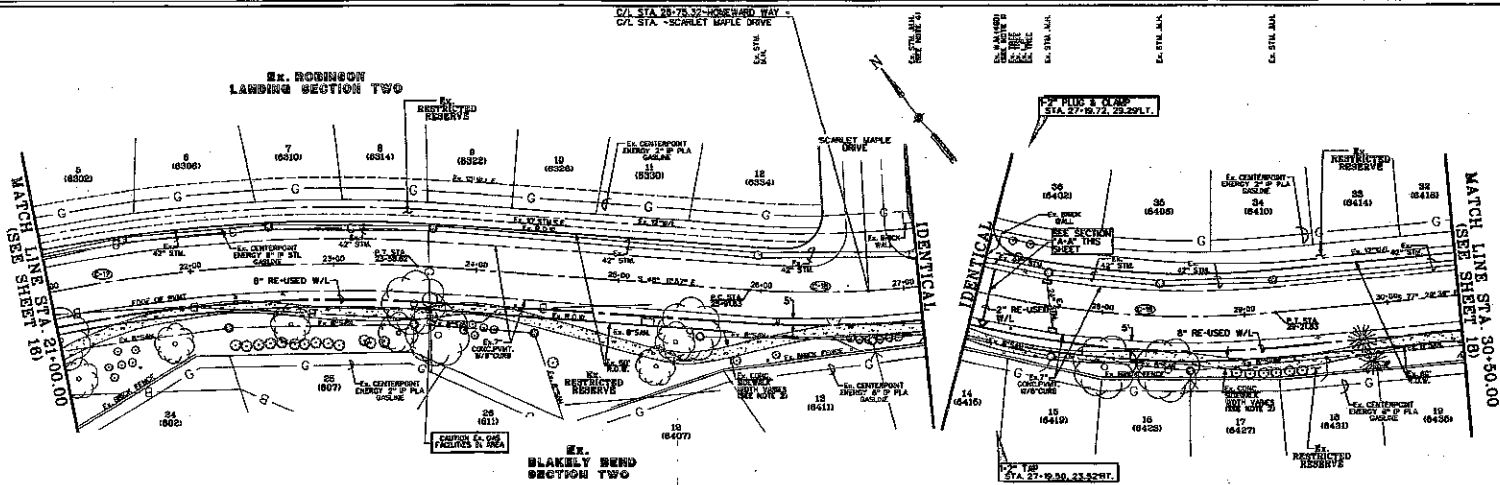


- NOTES**
- CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES.
 - ALL NEW CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAYS.
 - CONTRACTOR SHALL MAINTAIN ADEQUATE ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES.
 - CONTRACTOR SHALL MAINTAIN ADEQUATE ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES.
 - CONTRACTOR SHALL MAINTAIN ADEQUATE ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES.
 - CONTRACTOR SHALL MAINTAIN ADEQUATE ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES.

- LEGEND**
- ① INDICATES 18" VERTICAL CLEARANCE
 - ② INDICATES 24" VERTICAL CLEARANCE
 - ③ INDICATES 36" VERTICAL CLEARANCE
 - ④ INDICATES 48" VERTICAL CLEARANCE
 - ⑤ INDICATES 60" VERTICAL CLEARANCE
 - ⑥ INDICATES 72" VERTICAL CLEARANCE
 - ⑦ INDICATES 84" VERTICAL CLEARANCE
 - ⑧ INDICATES 96" VERTICAL CLEARANCE
 - ⑨ INDICATES 108" VERTICAL CLEARANCE
 - ⑩ INDICATES 120" VERTICAL CLEARANCE
 - ⑪ INDICATES 132" VERTICAL CLEARANCE
 - ⑫ INDICATES 144" VERTICAL CLEARANCE
 - ⑬ INDICATES 156" VERTICAL CLEARANCE
 - ⑭ INDICATES 168" VERTICAL CLEARANCE
 - ⑮ INDICATES 180" VERTICAL CLEARANCE
 - ⑯ INDICATES 192" VERTICAL CLEARANCE
 - ⑰ INDICATES 204" VERTICAL CLEARANCE
 - ⑱ INDICATES 216" VERTICAL CLEARANCE
 - ⑲ INDICATES 228" VERTICAL CLEARANCE
 - ⑳ INDICATES 240" VERTICAL CLEARANCE
 - ㉑ INDICATES 252" VERTICAL CLEARANCE
 - ㉒ INDICATES 264" VERTICAL CLEARANCE
 - ㉓ INDICATES 276" VERTICAL CLEARANCE
 - ㉔ INDICATES 288" VERTICAL CLEARANCE
 - ㉕ INDICATES 300" VERTICAL CLEARANCE
 - ㉖ INDICATES 312" VERTICAL CLEARANCE
 - ㉗ INDICATES 324" VERTICAL CLEARANCE
 - ㉘ INDICATES 336" VERTICAL CLEARANCE
 - ㉙ INDICATES 348" VERTICAL CLEARANCE
 - ㉚ INDICATES 360" VERTICAL CLEARANCE
 - ㉛ INDICATES 372" VERTICAL CLEARANCE
 - ㉜ INDICATES 384" VERTICAL CLEARANCE
 - ㉝ INDICATES 396" VERTICAL CLEARANCE
 - ㉞ INDICATES 408" VERTICAL CLEARANCE
 - ㉟ INDICATES 420" VERTICAL CLEARANCE
 - ㊱ INDICATES 432" VERTICAL CLEARANCE
 - ㊲ INDICATES 444" VERTICAL CLEARANCE
 - ㊳ INDICATES 456" VERTICAL CLEARANCE
 - ㊴ INDICATES 468" VERTICAL CLEARANCE
 - ㊵ INDICATES 480" VERTICAL CLEARANCE
 - ㊶ INDICATES 492" VERTICAL CLEARANCE
 - ㊷ INDICATES 504" VERTICAL CLEARANCE
 - ㊸ INDICATES 516" VERTICAL CLEARANCE
 - ㊹ INDICATES 528" VERTICAL CLEARANCE
 - ㊺ INDICATES 540" VERTICAL CLEARANCE
 - ㊻ INDICATES 552" VERTICAL CLEARANCE
 - ㊼ INDICATES 564" VERTICAL CLEARANCE
 - ㊽ INDICATES 576" VERTICAL CLEARANCE
 - ㊾ INDICATES 588" VERTICAL CLEARANCE
 - ㊿ INDICATES 600" VERTICAL CLEARANCE

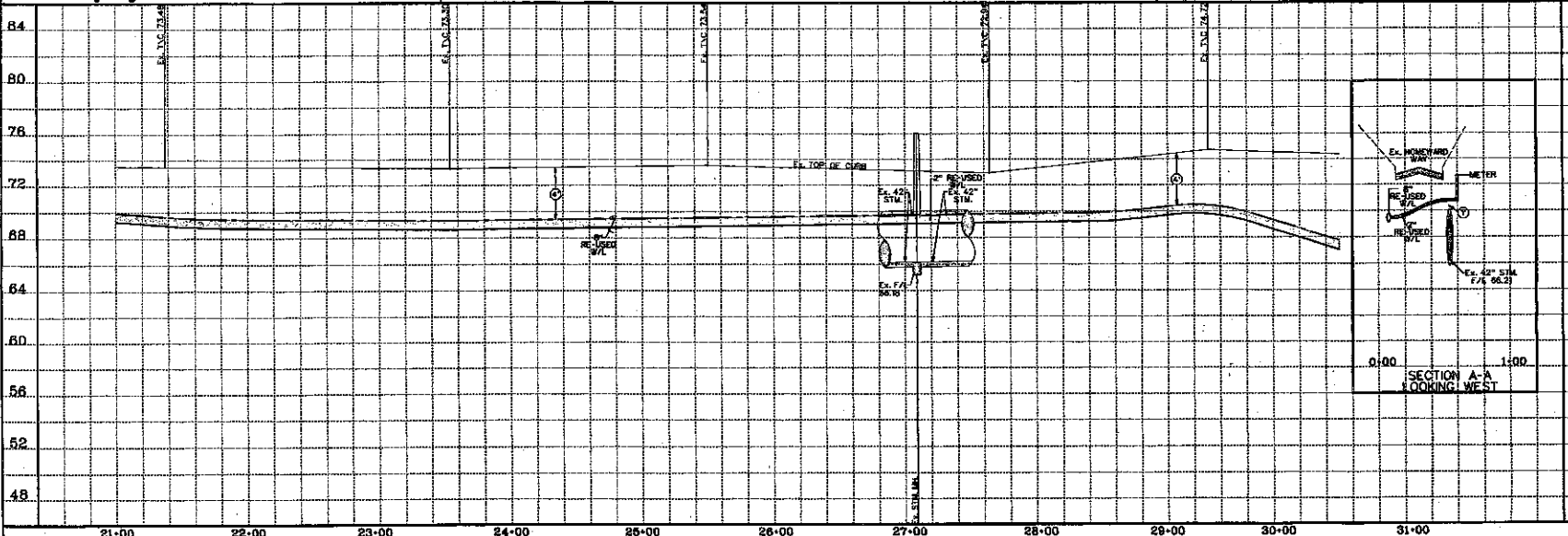


DESIGNED BY: <i>RLH</i> DESIGN CHECKED BY: <i>JRV</i> DRAWN BY: <i>RLH</i> CADD CHECKED BY: <i>RLH</i> SURVEY CHECKED BY: <i>RLH</i> QA/QC BY: <i>RLH</i> DATE: <i>11-11</i> QA/QC REVISIONS BY: <i>RLH</i>		Costello Engineering and Surveying 6990 Richmond Avenue, Suite 450 N Houston, Texas 77042 (713) 783-7798 (713) 783-3680, Fax TYPE FIRM REG. No. 280 TSPLS FIRM REG. No. 100488		NEW TERRITORY EAST HOMEWARD WAY (RECLAIMED EFFLUENT) RE-USED WATER LINE PLAN AND PROFILE ELLIS CREEK BLVD. STA. 7+00.00 TO STA. 17+00.00		SHEET 14 OF 36 SHEETS JOB NO. 19980200-148 DATE: 8/27/2015	
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HOMEWARD WAY (60' R.O.W.)


CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION



- NOTES**
- CONTRACTOR SHALL FIELD LOCATE APPROXIMATE CENTER OF EX. 42\"/>
 - REMOVE AND REPLACE EX. CONCRETE SIDEWALK AS REQUIRED TO CONFORM WITH RE-USED WATER LINE.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 2' CLEARANCE TO ALL EXISTING UTILITIES AND STRUCTURES.
 - CONTRACTOR SHALL MAINTAIN A MINIMUM 2' CLEARANCE TO ALL EXISTING UTILITIES AND STRUCTURES.
 - CONTRACTOR SHALL EXPOSED WORKING IN THE RIGHT OF WAY.
- LEGEND**
- INDICATES MIN. VERTICAL CLEARANCE
 - INDICATES MIN. VERTICAL CLEARANCE
 - INDICATES MIN. VERTICAL CLEARANCE
 - INDICATES RE-USED WATER LINE
 - (272) INDICATES WATER METER
 - INDICATES 6\"/>
 - 47 INDICATES LOT NUMBER
 - INDICATES STREET ADDRESS
 - EX. COMCAST CABLE
 - EX. OVERHEAD POWER
 - EX. UNDERGROUND ELECTRICAL
 - EX. GAS LINE
 - EX. IRRIGATION VALVE
 - EX. GATE VALVE & BOX
 - EX. LIGHT POLE
 - EX. WATER METER
 - EX. FLUSH VALVE
 - EX. IRRIGATION CONTROL BOX


NO.	REVISION	DATE	BY

DESIGNED BY: <i>RLH</i>	Costello Engineering and Surveying 9990 Richmond Avenue, Suite 450 N Houston, Texas 77042 (713) 783-7788 (713) 783-3580, Fax TSPS FIRM REG. No. 220 TSPS FIRM REG. No. 100486
DRAWN BY: <i>RLH</i>	
CHECKED BY: <i>RLH</i>	
SURVEY CHECKED BY: <i>RLH</i>	
QA/QC BY: <i>RLH</i> DATE: <i>1/11/11</i>	



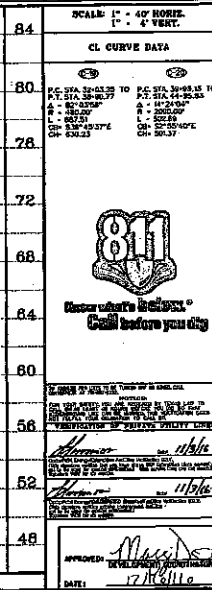
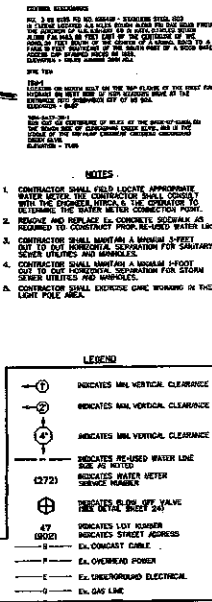
Engineering and Surveying
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Houston, Texas 77042
(713) 783-7788 (713) 783-3580, Fax
TSPS FIRM REG. No. 220
TSPS FIRM REG. No. 100486

NEW TERRITORY
EAST HOMEWARD WAY
(RECLAIMED EFFLUENT/RE-USED WATER LINE)
PLAN AND PROFILE
HOMEWARD WAY
STA. 21+00.00 TO STA. 30+50.00



APPROVED: *Michael J. McCall*
DATE: *1/11/11*

SHEET 17
OF 36 SHEETS
JOB NO. 10000000-142
1/27/2015



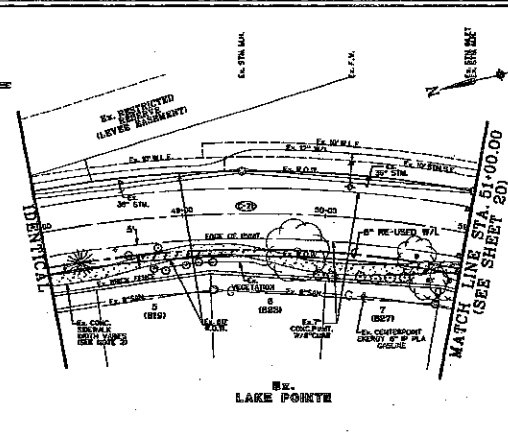
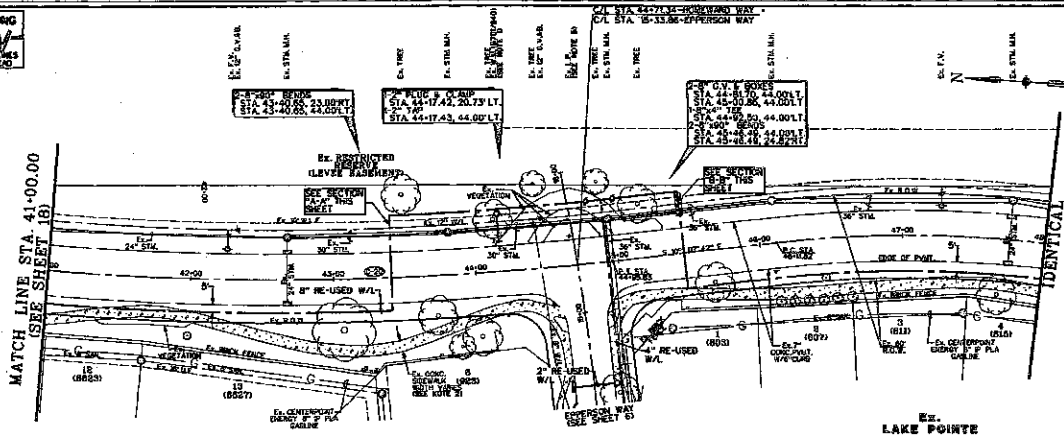
STATE OF TEXAS
San Antonio
2007
REGISTERED
PROFESSIONAL ENGINEER
70/02/2016

SHEET 18
OF 36 SHEETS
JOB NO. 1003030-142

					DRAWN BY: RLM
					DRIEN CHECKED BY: JRV
					DRAWN BY: RLM
					CODD CHECKED BY:
					SURVEY CHECKED BY:
					QA/QC BY: BS DATE: 1-17-97
					QA/QC REVISIONS BY: RLM



WARNING
POWER LINES
OVERHEAD



CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.

NOTES
1. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
2. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
3. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
4. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
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10. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.

- 1. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
- 2. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
- 3. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
- 4. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
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- 6. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
- 7. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
- 8. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
- 9. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.
- 10. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION.

LEGEND	
	MINIMUM VERTICAL CLEARANCE
	MINIMUM HORIZONTAL CLEARANCE
	MINIMUM VERTICAL CLEARANCE
	MINIMUM HORIZONTAL CLEARANCE
	MINIMUM VERTICAL CLEARANCE
	MINIMUM HORIZONTAL CLEARANCE
	MINIMUM VERTICAL CLEARANCE
	MINIMUM HORIZONTAL CLEARANCE
	MINIMUM VERTICAL CLEARANCE
	MINIMUM HORIZONTAL CLEARANCE

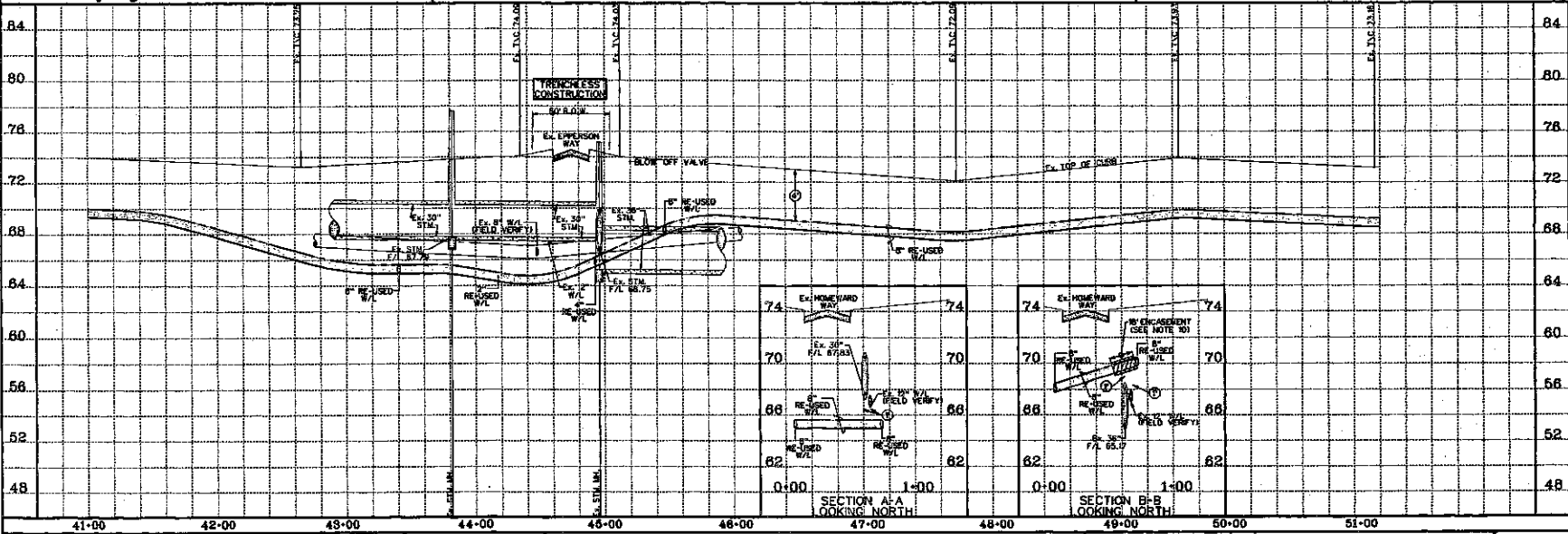


811
Call before you dig

EX. BLAKELY BEND
SECTION TWO

HOMERD WAY (60' R.O.W.)

CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION



SCALE 1" = 40' HORIZ. 1" = 4' VERT.	
CL CURVE DATA	
P.C. STA. 41+00.00 P.T. STA. 41+00.00 L = 0.00 R = 0.00 O.C. STA. 41+00.00	P.C. STA. 41+00.00 P.T. STA. 41+00.00 L = 0.00 R = 0.00 O.C. STA. 41+00.00

DESIGNED BY: <i>ALM</i>	DATE: <i>1/1/11</i>
DESIGN CHECKED BY: <i>TRV</i>	DATE: <i>1/1/11</i>
DRAWN BY: <i>ALM</i>	DATE: <i>1/1/11</i>
CHECKED BY: <i>ALM</i>	DATE: <i>1/1/11</i>
SURVEY CHECKED BY: <i>ALM</i>	DATE: <i>1/1/11</i>
QA/QC BY: <i>ALM</i>	DATE: <i>1/1/11</i>
QA/QC REVISIONS BY: <i>ALM</i>	DATE: <i>1/1/11</i>



Engineering and Surveying
8690 Richmond Avenue, Suite 450 N
Houston, Texas 77042
(713) 783-7788 (713) 783-3680, Fax
TYPE FIRM REG. No. 280
TSPLS FIRM REG. No. 100488

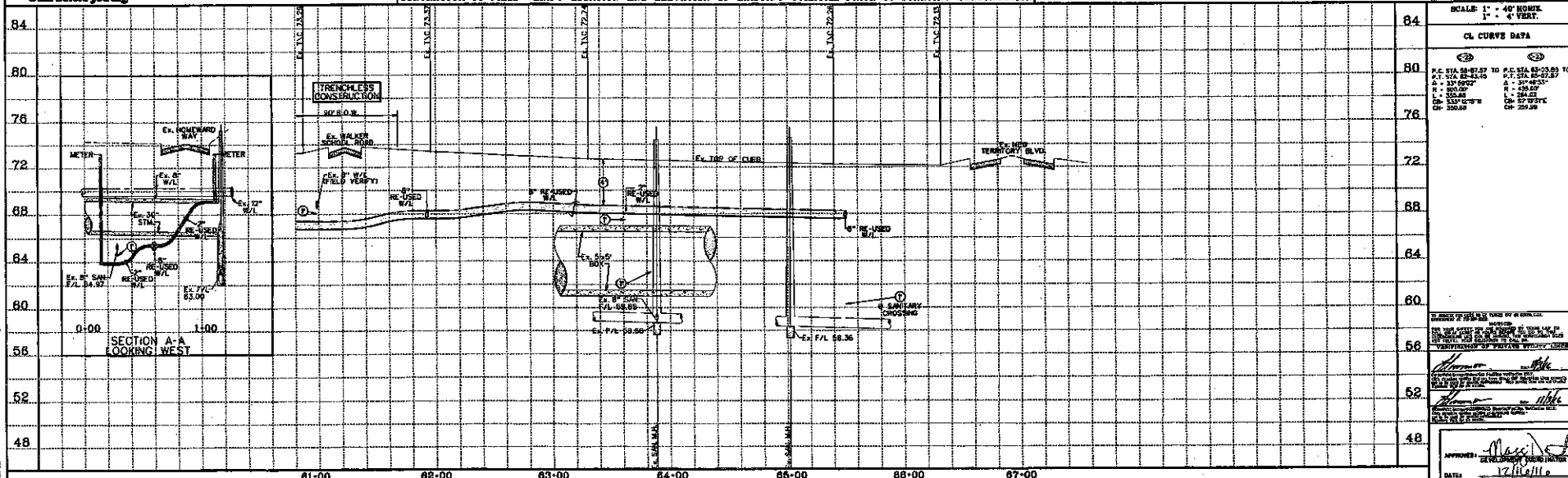
NEW TERRITORY
EAST HOMERD WAY
(RECLAIMED EFFLUENT) RE-USED WATER LINE
PLAN AND PROFILE
HOMERD WAY
STA. 41+00.00 TO STA. 51+00.00

SHEET	19
OF	36 SHEETS
JOB NO.	19990200-148



HOMeward WAY (R.O.W. VARIES)	
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CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO STARTING CONSTRUCTION



DESIGNED BY: ELM
 DESIGN CHECKED BY: SPV
 DRAWN BY: ELM
 CADD CHECKED BY: _____
 SURVEY CHECKED BY: _____
 QA/QC BY: AS DATE: 1-27-01
 QA/QC REVISIONS BY: ELM



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Houston, Texas 77042
(713) 783-7788 (713) 783-3580, Fax
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100488

NEW TERRITORY
EAST HOMEWARD WAY
(RECLAIMED EFFLUENT) RE-USED WATER LINE
PLAN AND PROFILE
HOMEWARD WAY
STA. 60+80.00 TO STA. 67+00.00



SHEET 21
OF 36 SHEETS

Manuscript received 11/10/00; revised manuscript received 1/10/01; accepted manuscript received 2/10/01.



POLLUTION PREVENTION LEGEND



- NOTES:
1. PLACE FILTER FABRIC SILT FENCE 4'-5' FEET AROUND ALL INLETS.
 2. ALL SOIL STOCKPILES OF SIGNIFICANT SIZE SHALL BE ENCOMPASSED BY A SILT FENCE.
 3. ALL PROPOSED SWALES TO BE CONSTRUCTED BY THE CONTRACTOR FOR MAINTAINING SITE DRAINAGE SHALL HAVE SILT FENCES PLACED ACROSS THE ENTIRE SWALE JUST UPSTREAM OF THE OUTFALL LOCATION.
 4. A VEHICLE WASH-DOWN AREA FOR THE PROJECT MAY BE LOCATED BY THE CONTRACTOR WHEN IN USE BY THE CONTRACTOR. THE CONTRACTOR SHALL PROTECT THE INLET OVER THE WASH-DOWN AREA. THE LOCATION OF THE WASH-DOWN IS AT THE CONTRACTOR'S OPTION.
 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SWPPP FEATURES INDICATED ON THIS PLAN.
 6. UPON PROJECT COMPLETION, THE ENTIRE DISTURBED AREA NOT PROPOSED FOR IMMEDIATE RECONSTRUCTION SHALL BE RESEED AS FOR THE POLLUTION PREVENTION PLAN.
 7. UPON PROJECT COMPLETION AND FINAL STABILIZATION, ALL SILT FENCE SHALL BE REMOVED AND DISPOSED OF.

DESIGNED BY: <u>ELN</u>	DATE: <u>11/11/05</u>
DESIGN CHECKED BY: <u>JLV</u>	DATE: <u>11/11/05</u>
DRAWN BY: <u>ELN</u>	DATE: <u>11/11/05</u>
SURVEY CHECKED BY: <u>ELN</u>	DATE: <u>11/11/05</u>
QA/QC BY: <u>ELN</u>	DATE: <u>11/11/05</u>
QA/QC REVISIONS BY: <u>ELN</u>	DATE: <u>11/11/05</u>



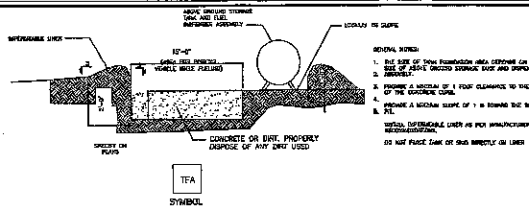
Engineering and Surveying
9990 Richmond Avenue, Suite 450 N
Houston, Texas 77042
(713) 763-7788 (713) 763-3580, Fax
TBE FIRM REG. No. 280
TBE FIRM REG. No. 100486

NEW TERRITORY
EAST HOMEWARD WAY
(RECLAIMED EFFLUENT) RE-USED WATER LINE
POLLUTION PREVENTION
PLAN LAYOUT

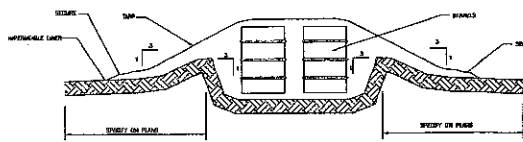


APPROVED: Michael J. Williams
DATE: 11/11/05

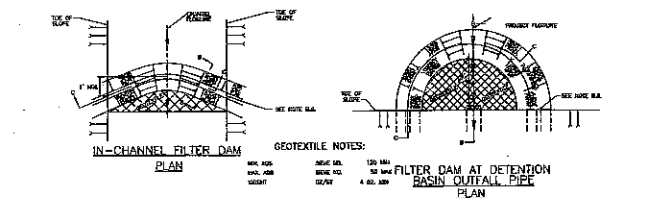
SHEET 22
OF 36 SHEETS
JOB NO. 19990001-148



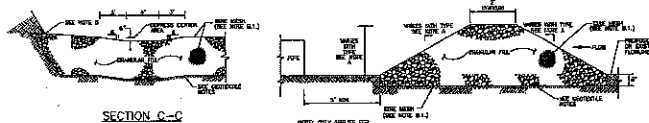
ABOVE GROUND TEMP. VEHICLE & EQUIPMENT FUELING AREA WITH TANK



BARREL STORAGE AREA



IN-CHANNEL FILTER DAM

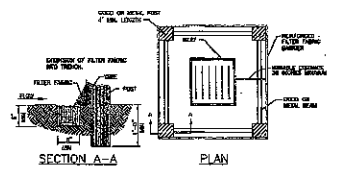


SECTION C-C

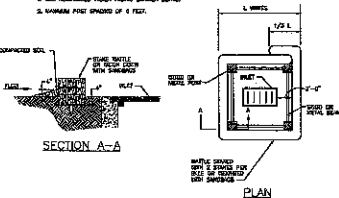
- GENERAL NOTES:
1. TYPE 1 (NON-REINFORCED)
 - a. HEIGHT - 12" MIN.
 - b. TOP WIDTH - 2" MIN.
 - c. SLOPE - 1:1 MIN.
 2. TYPE 2 (REINFORCED)
 - a. HEIGHT - 12" MIN.
 - b. TOP WIDTH - 2" MIN.
 - c. SLOPE - 1:1 MIN.
 3. TYPE 3 (REINFORCED)
 - a. HEIGHT - 12" MIN.
 - b. TOP WIDTH - 2" MIN.
 - c. SLOPE - 1:1 MIN.
 4. TYPE 4 (REINFORCED)
 - a. HEIGHT - 12" MIN.
 - b. TOP WIDTH - 2" MIN.
 - c. SLOPE - 1:1 MIN.
 5. TYPE 5 (REINFORCED)
 - a. HEIGHT - 12" MIN.
 - b. TOP WIDTH - 2" MIN.
 - c. SLOPE - 1:1 MIN.



FILTER DAM



SECTION A-A

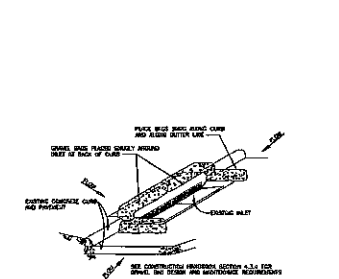


SECTION A-A

INLET PROTECTION BARRIERS FOR STAGE I INLETS

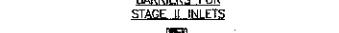


SECTION A-A



SECTION A-A

INLET PROTECTION BARRIERS FOR STAGE II INLETS



SECTION A-A



SECTION A-A



SECTION A-A



SECTION A-A



SECTION A-A



SECTION A-A



SECTION A-A



SECTION A-A



SECTION A-A



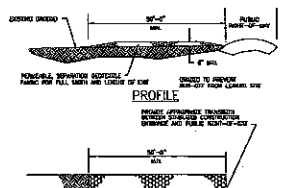
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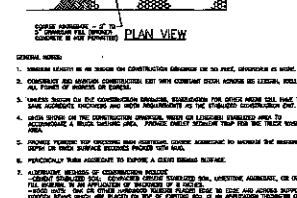
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SECTION A-A

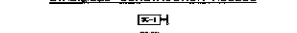


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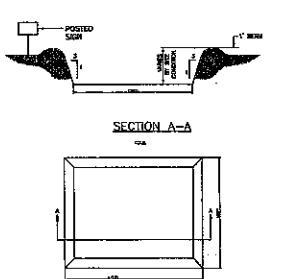


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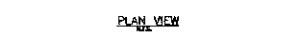
STABILIZED CONSTRUCTION ACCESS



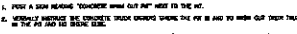
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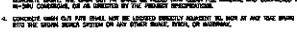
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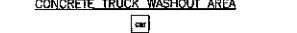
SECTION A-A



SECTION A-A



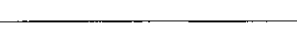
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SECTION A-A



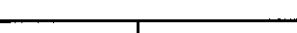
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SECTION A-A



SECTION A-A



SECTION A-A



SECTION A-A



SECTION A-A



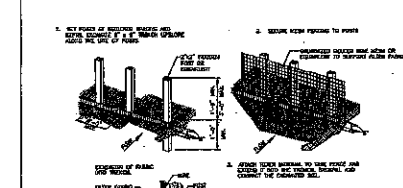
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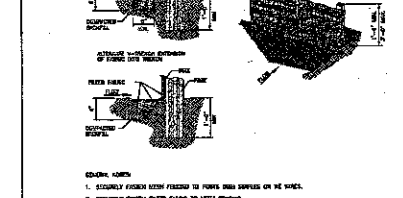
SECTION A-A



SECTION A-A

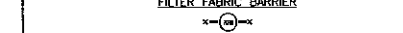


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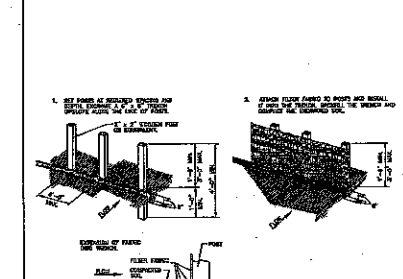


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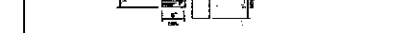
REINFORCED FILTER FABRIC BARRIER



SECTION A-A



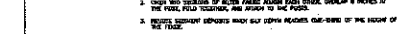
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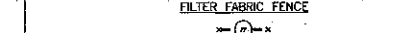
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SECTION A-A



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SECTION A-A



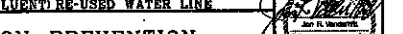
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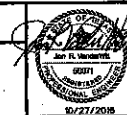
SECTION A-A

DESIGNED BY: *RLH*
 DRAWN BY: *RLH*
 CHECKED BY: *RLH*
 SURVEY CHECKED BY: *RLH*
 DATE: *12/1/00*
 DATE: *12/1/00*



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 TPE FIRM REG. No. 280
 TBPL FIRM REG. No. 10486

NEW TERRITORY
 EAST HOMEWARD WAY
 (RECLAIMED EFFLUENT) RE-USED WATER LINE
 POLLUTION PREVENTION
 PLAN DETAILS



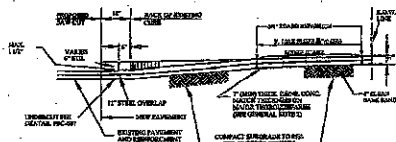
APPROVED: *M. J. ...*
 DATE: *12/1/00*

SHEET 23

OF 36 SHEETS

708 NO. 100000000-142

A. USE FOR ALL PROPOSED EXISTING CURB REMOVAL FOR DRIVEWAYS (PLAN VIEW NOT TO SCALE)



CENTRAL NOTES:

1. CONTRACTOR SHALL MAINTAIN POSITIVE PRESSURE THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD TO PREVENT AIR FROM EXHAUSTING THROUGH THE DRAINAGE. CONTRACT TO 100% OF DESIGN PRESSURE RANGE (15-25 GPa) BEHINDING THE GROUNDWATER EXHAUSTION TO THE DEGREE TO MAINTAIN POSITIVE PRESSURE THROUGHOUT THE CONSTRUCTION.
2. AIRFLOW THROUGH THE DRAINAGE SYSTEM SHALL BE AS HIGH AS POSSIBLE WITHOUT CAUSING AERIAL LEAKS TO THE AIR PUMP IN ORDER TO ACHIEVE 100% OF DESIGN PRESSURE RANGE (15-25 GPa) BEHINDING THE GROUNDWATER EXHAUSTION TO THE DEGREE TO MAINTAIN POSITIVE PRESSURE THROUGHOUT THE CONSTRUCTION.
3. AIRFLOW THROUGH THE DRAINAGE SYSTEM SHALL BE AS HIGH AS POSSIBLE WITHOUT CAUSING AERIAL LEAKS TO THE AIR PUMP IN ORDER TO ACHIEVE 100% OF DESIGN PRESSURE RANGE (15-25 GPa) BEHINDING THE GROUNDWATER EXHAUSTION TO THE DEGREE TO MAINTAIN POSITIVE PRESSURE THROUGHOUT THE CONSTRUCTION.
4. AIRFLOW THROUGH THE DRAINAGE SYSTEM SHALL BE AS HIGH AS POSSIBLE WITHOUT CAUSING AERIAL LEAKS TO THE AIR PUMP IN ORDER TO ACHIEVE 100% OF DESIGN PRESSURE RANGE (15-25 GPa) BEHINDING THE GROUNDWATER EXHAUSTION TO THE DEGREE TO MAINTAIN POSITIVE PRESSURE THROUGHOUT THE CONSTRUCTION.
5. AIRFLOW THROUGH THE DRAINAGE SYSTEM SHALL BE AS HIGH AS POSSIBLE WITHOUT CAUSING AERIAL LEAKS TO THE AIR PUMP IN ORDER TO ACHIEVE 100% OF DESIGN PRESSURE RANGE (15-25 GPa) BEHINDING THE GROUNDWATER EXHAUSTION TO THE DEGREE TO MAINTAIN POSITIVE PRESSURE THROUGHOUT THE CONSTRUCTION.
6. AIRFLOW THROUGH THE DRAINAGE SYSTEM SHALL BE AS HIGH AS POSSIBLE WITHOUT CAUSING AERIAL LEAKS TO THE AIR PUMP IN ORDER TO ACHIEVE 100% OF DESIGN PRESSURE RANGE (15-25 GPa) BEHINDING THE GROUNDWATER EXHAUSTION TO THE DEGREE TO MAINTAIN POSITIVE PRESSURE THROUGHOUT THE CONSTRUCTION.
7. AIRFLOW THROUGH THE DRAINAGE SYSTEM SHALL BE AS HIGH AS POSSIBLE WITHOUT CAUSING AERIAL LEAKS TO THE AIR PUMP IN ORDER TO ACHIEVE 100% OF DESIGN PRESSURE RANGE (15-25 GPa) BEHINDING THE GROUNDWATER EXHAUSTION TO THE DEGREE TO MAINTAIN POSITIVE PRESSURE THROUGHOUT THE CONSTRUCTION.
8. AIRFLOW THROUGH THE DRAINAGE SYSTEM SHALL BE AS HIGH AS POSSIBLE WITHOUT CAUSING AERIAL LEAKS TO THE AIR PUMP IN ORDER TO ACHIEVE 100% OF DESIGN PRESSURE RANGE (15-25 GPa) BEHINDING THE GROUNDWATER EXHAUSTION TO THE DEGREE TO MAINTAIN POSITIVE PRESSURE THROUGHOUT THE CONSTRUCTION.
9. AIRFLOW THROUGH THE DRAINAGE SYSTEM SHALL BE AS HIGH AS POSSIBLE WITHOUT CAUSING AERIAL LEAKS TO THE AIR PUMP IN ORDER TO ACHIEVE 100% OF DESIGN PRESSURE RANGE (15-25 GPa) BEHINDING THE GROUNDWATER EXHAUSTION TO THE DEGREE TO MAINTAIN POSITIVE PRESSURE THROUGHOUT THE CONSTRUCTION.
10. AIRFLOW THROUGH THE DRAINAGE SYSTEM SHALL BE AS HIGH AS POSSIBLE WITHOUT CAUSING AERIAL LEAKS TO THE AIR PUMP IN ORDER TO ACHIEVE 100% OF DESIGN PRESSURE RANGE (15-25 GPa) BEHINDING THE GROUNDWATER EXHAUSTION TO THE DEGREE TO MAINTAIN POSITIVE PRESSURE THROUGHOUT THE CONSTRUCTION.

**SIDEWALKS & DRIVEWAYS ON
CURB TYPE STREETS
COMMERCIAL AREA**

DRAWN BY: L. BRIDEKA DATE DRAWN: 2-1-04	REVISED BY: J. METADUS DATE REVISED: 4-7-00
APPROVED BY: L. HODD DATE: 2-1-04	DRAWING NO. ERC-025A

FORT BEND COUNTY ENGINEERING DEPARTMENT

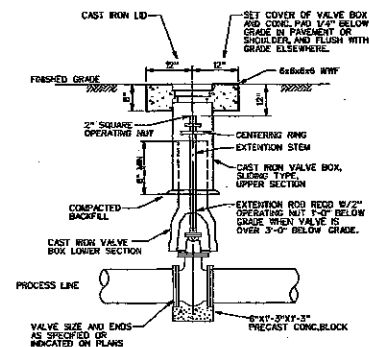
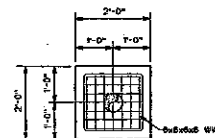
GENERAL NOTES FOR SIDEWALKS AND DRIVEWAYS

1. SAW CUT EXISTING CURB AT EACH END AND KNOCK OUT CURB FROM BEGINNING TO END OF PROPOSED DRIVEWAY.
2. SAW CUT EXISTING PAVEMENT A MINIMUM OF 18" INCHES AWAY FROM BACK OF CURB (GUTTER LINE) AND BREAK OUT TO EXPOSE EXISTING REINFORCEMENT STEEL.
3. COMPACT SUBGRADE FOR PROPOSED DRIVEWAY CONNECTION FROM PROPOSED SAW CUT AT EXISTING PAVEMENT TO RIGHT-OF-WAY LINE. COMPACT TO 98% OF STANDARD PROCTOR DENSITY (+/- 2% OPT. MOISTURE). THE COUNTY ENGINEER RESERVES THE RIGHT TO REQUIRE LABORATORY TESTS TO BE CONDUCTED.
4. PLACE AND COMPACT 4" CLEAN BANK SAND.
5. MAINTAIN GUTTER LINE WITH FACE OF EXISTING CURB.
6. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE TIED TO EXISTING ROADWAY REINFORCING STEEL WITH A MINIMUM LAP OF 12 INCHES.
7. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE #4 DEFORMED REBAR (GALV. OR ASTM A615) GRADE 60, UNLESS NOTED OTHERWISE. SPACED AT 24 INCHES C.C., EACH WAY, WITH 12 INCHES MINIMUM LAP (6" x 6" OR 8" x 8" AS ALTERNATE) FROM PROPOSED SAW CUT TO RIGHT-OF-WAY LINE.
8. PROPOSED DRIVEWAY, CURB, GUTTER LINE, AND GRADE SHALL MATCH EXISTING STREET.
9. PROPOSED DRIVEWAY SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE, CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 03301), 7 INCHES THICK FROM PROPOSED SAW CUT TO RIGHT-OF-WAY LINE (PROPERTY LINE).
10. PROPOSED SIDEWALK SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE, CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 03301), 4 INCHES THICK AND 4 FEET MINIMUM WIDTH. SEE DRAWING NO. FBC 2/A FOR ADDITIONAL INFORMATION AND DETAILS.

CONSTRUCTION NOTES FOR
SIDEWALKS & DRIVEWAYS WITH
CURB TYPE STREETS
COMMERCIAL AREA

DRAWN BY: L. BRDECKA DATE DRAWN: 2-1-94	REVISED BY: L. BRDECKA DATE REVISED: 3-10-05
APPROVED BY: L. HOOD DATE: 2-1-94	DRAWING NO. ERC-025B

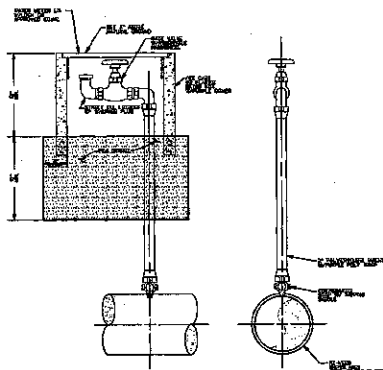
FORT BEND COUNTY ENGINEERING DEPARTMENT



NOTE:

- NOTE:
1. ALL BURED VALVES SHALL HAVE VALVES BOXES, AND STEMS EXTENSIONS AS SHOWN.
 2. ALL VALVES TO BE ANWIA STANDARD CLOCKWISE RIGHT OPENING.

BURIED GATE VALVE BOX
W/ CONCRETE PAD



1. ALL AGES AND SEXES SHOULD BE THE SAME FOR
IN COORDINATION.
2. FOR 3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035

2" BLOW-OFF VALVE
N.T.S.

						DESIGNED BY: BJA
						DISTION CHECKED BY: JAV
						DRAWN BY: BJA
						CODS CHECKED BY:
						SURVEY CHECKED BY:
						QA/QC BY: BS DATE: 6-9-78
						QA/QC REVISIONS BY: BJA
No.	REVISION	DATE	BY			

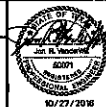
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Houston, Texas 77042
(713) 783-7788 (713) 783-3580, Fax
TBPE FIRM REG. No. 280
TBPLS FIRM REG. No. 100486

NEW TERRITORY
EAST HOMEWARD WAY
(RECLAIMED EFFLUENT) RE-USED WATER LINE

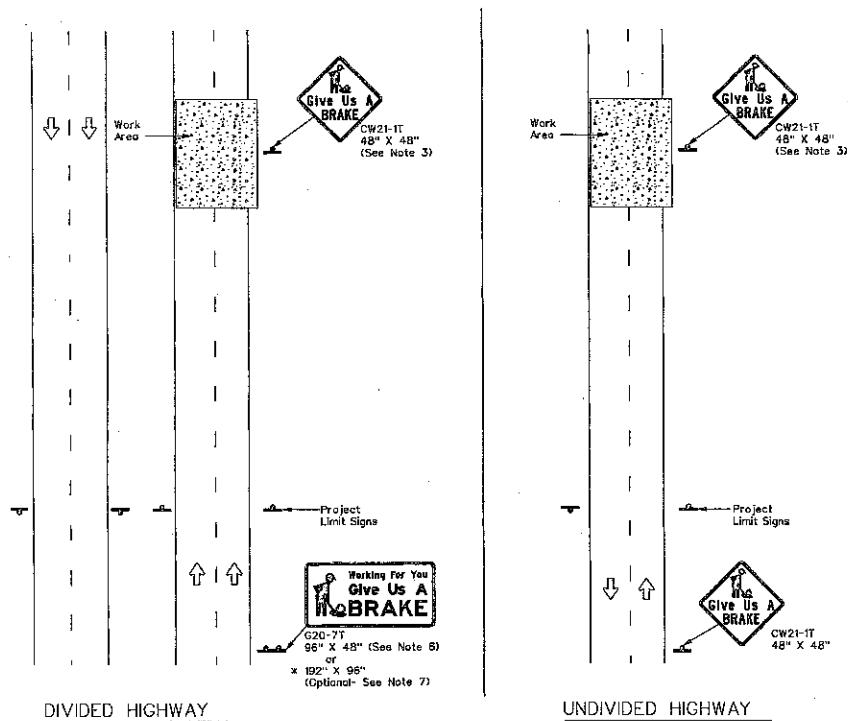
MISCELLANEOUS DETAILS



APPROVED: Maxine
DEVELOPMENT COMMISSION
DATE: 12/11/11

SHEET 24
OF 36 SHEETS

DISCLAIMER: Use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the consequences of this standard or other standards or for incorrect results or damages resulting from its use.



* When the optional larger WORKING FOR YOU GIVE US A BRAKE (G20-7T) 192" x 96" sign is required, the locations shall be noted elsewhere in the plans.

SUMMARY OF LARGE SIGNS

BACKGROUND COLOR	SIGN DESIGNATION	SIGN	SIGN DIMENSIONS	REFLECTIVE SHEETING	SQ. FT.	GALVANIZED STRUCTURAL STEEL		DRILLED SHAFT
						Size	(LF)	
Orange	G20-7T		96" X 48"	Type B _{FL} or C _{FL}	32	▲	▲	▲
Orange	G20-7T		192" X 96"	Type B _{FL} or C _{FL}	128	WBx18	16	12

▲ See Note 5 Below

LEGEND

	Sign
	Large Sign
	Traffic Flow

DEPARTMENTAL MATERIAL SPECIFICATIONS

PLYWOOD SIGN BLANKS	DMS-7100
ALUMINUM SIGN BLANKS	DMS-7110
SIGN FACE MATERIALS	DMS-8300

COLOR	USAGE	SHEETING MATERIAL
ORANGE	BACKGROUND	TYPE B _{FL} OR TYPE C _{FL}
BLACK	LEGEND & BORDERS	NON-REFLECTIVE ACRYLIC FILM

GENERAL NOTES

- See BC and SMD sheets for additional sign support details.
- Sign locations shall be approved by the Engineer.
- For projects more than two miles in length, Give Us A BRAKE signs should be repeated halfway through the project. The Give Us A Brake (CW21-1T) may be used for this purpose.
- Work zone speed limits are sometimes used in conjunction with GIVE US A BRAKE signing. See BC(3) for location and spacing of construction speed zone signing when required.
- Give Us A Brake (CW21-1T) signs and supports shall be considered subsidiary to Item 502, "Barriercades, Signs and Traffic Handling."
- The 96" X 48" Working For You Give Us A BRAKE (G20-7T) may use a 1/2" or 5/8" plywood substrate or 0.125" aluminum sheeting substrate and may be supported by two 4" x 8" wood posts with drilled holes for breakaway as per BC(5) and will be subsidiary to Item 502.
- The Working For You Give Us A BRAKE (G20-7T) 192" X 96" sign shall be paid for under the following specification items:
Item 635 - Aluminum Signs
Item 647 - Large Roadside Sign Supports and Assemblies.
Item 415 - Drilled Shaft Foundations
- All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.

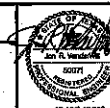
Texas Department of Transportation		Traffic Operations Division	
WORK ZONE "GIVE US A BRAKE" SIGNS			
WZ(BRK)-13			
PLAN	DATE	BY	DATE
©12/01	August 1995	CON	12/01
REVISED			
5-98	5-98	7-13	
8-98	3-03		
DIST		COUNTY	SHEET NO.
			18

				DESIGNED BY: <u>SLM</u>
				DESIGN CHECKED BY: <u>SLV</u>
				DRAWN BY: <u>SLM</u>
				CADD CHECKED BY: _____
				SURVEY CHECKED BY: _____
				QA/QC BY: <u>SL</u> DATE: <u>12/11/95</u>
				QA/QC REVISIONS BY: <u>SLM</u>
No.	REVISION	DATE	BY	

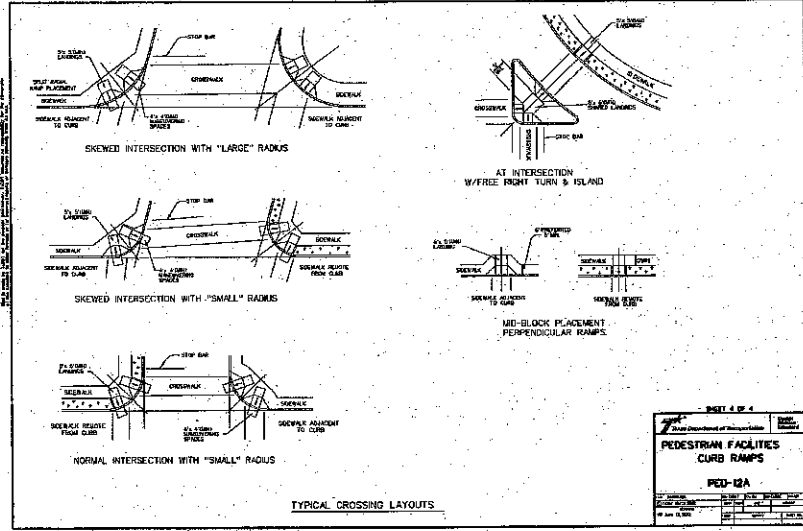
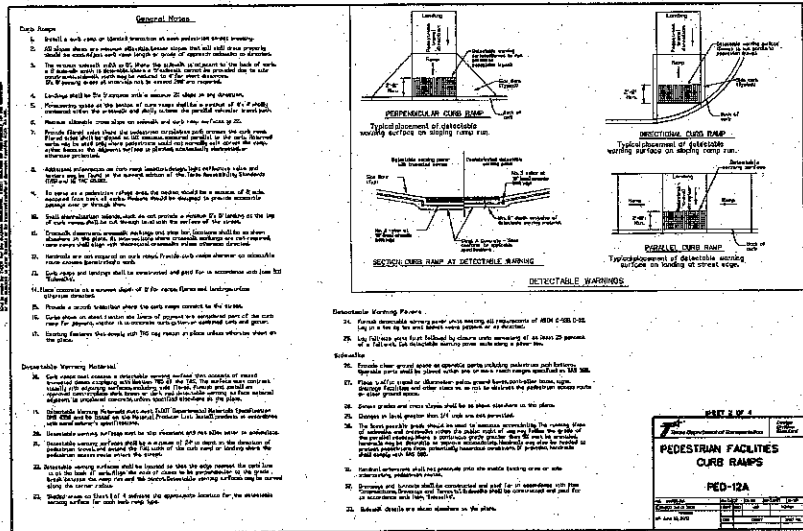
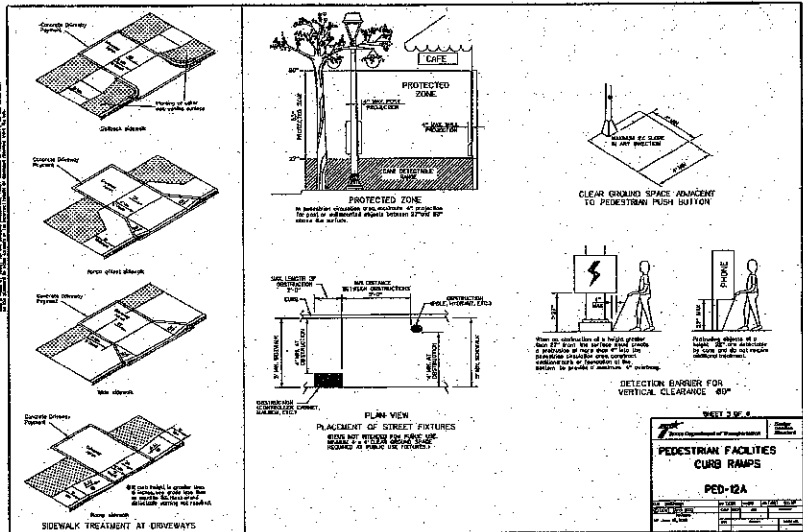
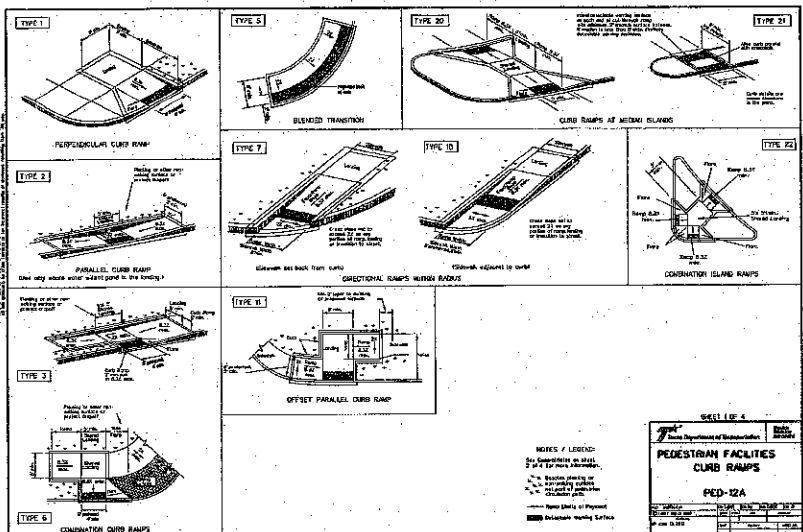


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TBPLS FIRM REG. No. 100486

NEW TERRITORY
EAST HOMEWARD WAY
(RECLAIMED EFFLUENT) RE-USED WATER LINE
WORK ZONE
"GIVE US A BRAKE"
SIGNS



APPROVED: 12/11/95
DATE: 12/11/95
SHEET: 25
OF: 36
JOB NO. 18080800-142



NO.	REVISION	DATE	BY

DESIGNED BY: **RLM**
 DESIGN CHECKED BY: **WV**
 DRAWN BY: **RLM**
 CADD CHECKED BY:
 SURVEY CHECKED BY:
 QA/QC BY:
 QA/QC REVISIONS BY: **RLM**

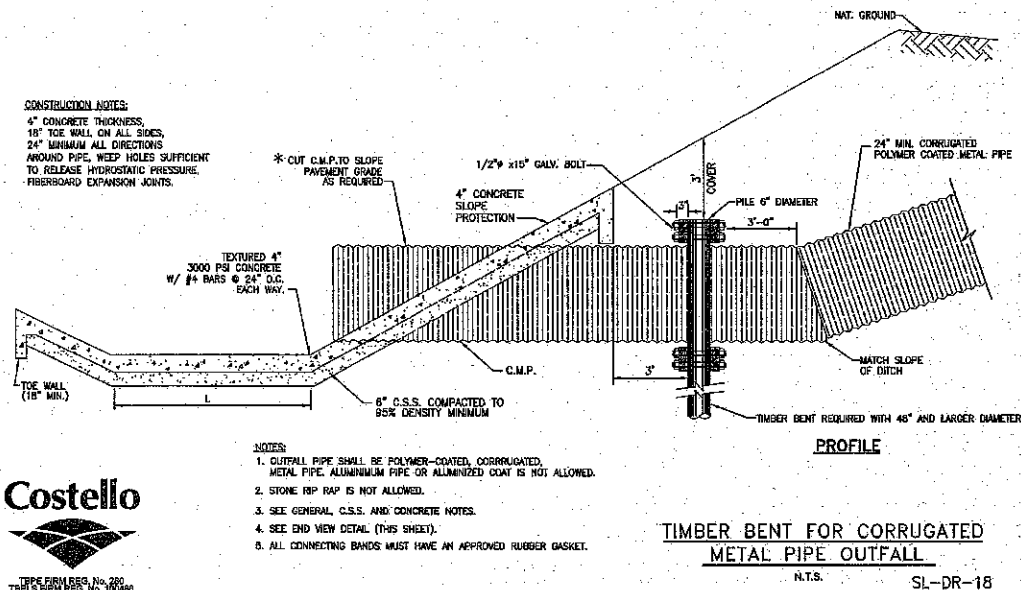
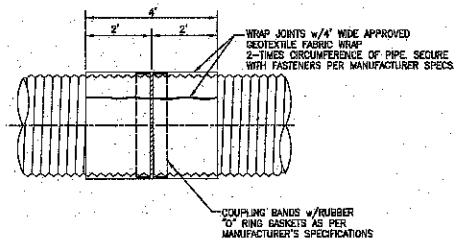
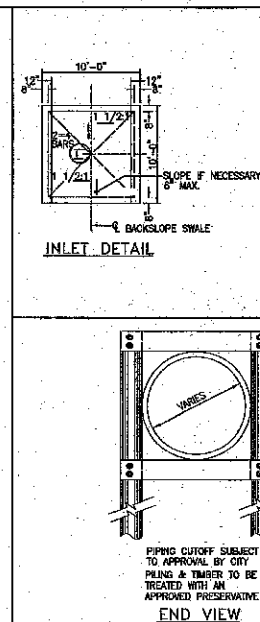
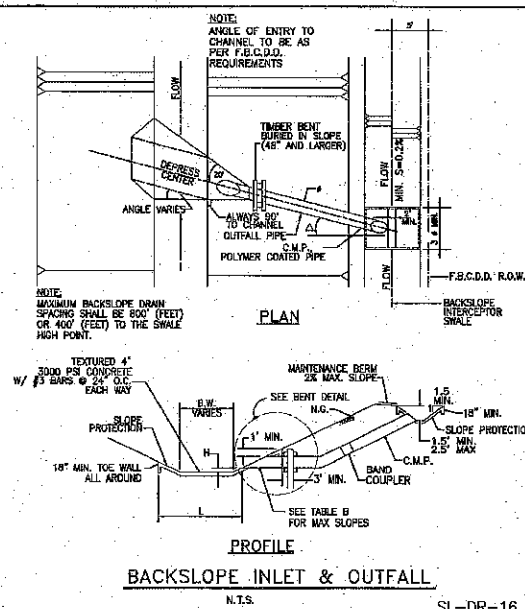
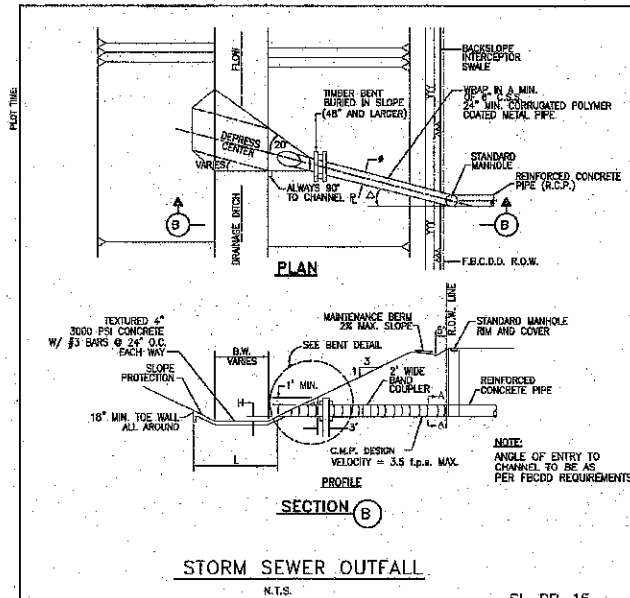


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NEW TERRITORY
 EAST HOMEWARD WAY
 (RECLAIMED EFFLUENT RE-USED WATER LINE)
**PEDESTRIAN FACILITIES
 CURB RAMPS - PED-12A**



APPROVED: **Michael J. Hinkle**
 DATE: **12/14/16**
 SHEET: **26**
 OF: **36** SHEETS
 JOB NO.: **18060000-142**
 12/27/2016



SIZE 2 1/2" X 1 1/2" CORRUSSION	PIPE GAUGE	BAND COUPLER GAUGE	SIZE 3"X1" & 5"X1" CORRUSSION	PIPE GAUGE	BAND COUPLER GAUGE
24"	12	16			
30"	12	16			
36"	12	16			
42"	12	16			
48"	12	16	48"	16	18
54"	12	16	54"	16	18
60"	12	14	60"	16	18
66"	10	12	66"	16	18
72"	10	12	72"	16	18
78"	8	10	78"	14	16
84"	8	10	84"	14	16

PIPE DIA.	SLOPE	VELOCITY
24"	0.6%	3.25 f.p.s.
36"	0.3%	3.00 f.p.s.
42"	0.2%	2.75 f.p.s.
48"	0.2%	3.00 f.p.s.
84"	0.2%	3.25 f.p.s.

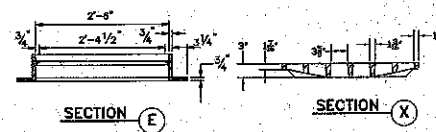
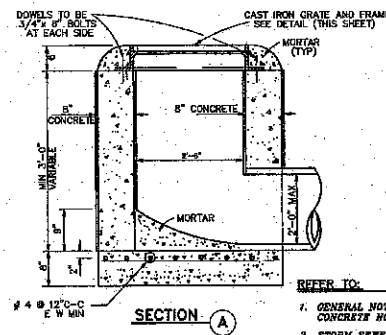
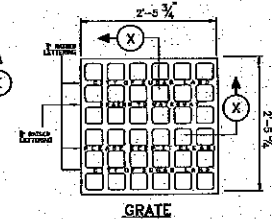
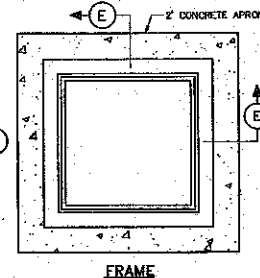
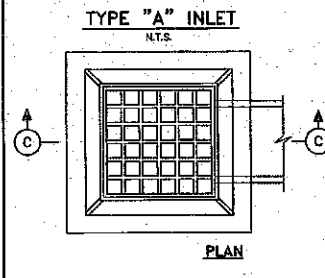
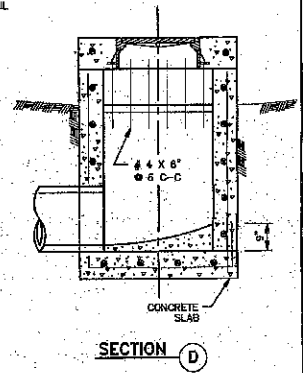
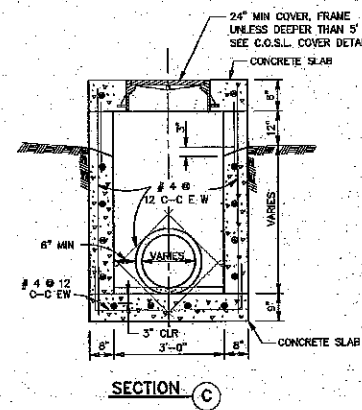
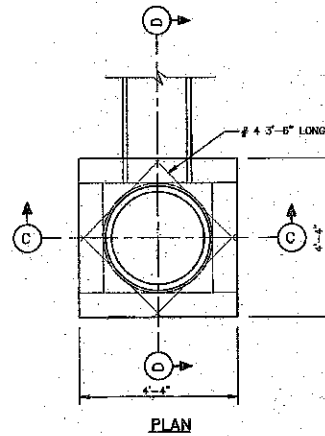
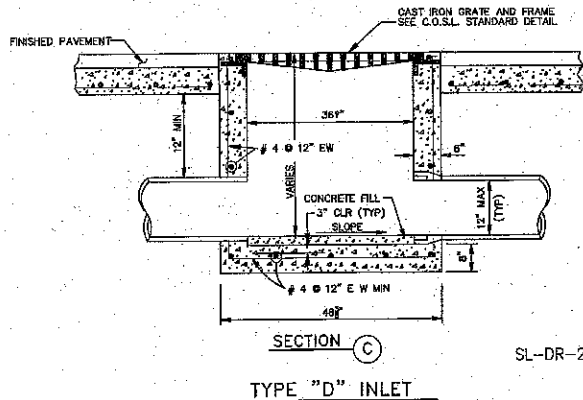
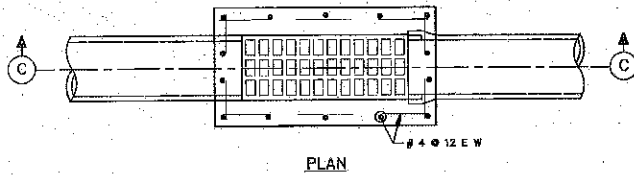
CONSTRUCTION NOTES:

L. $\frac{B.W.}{PIPE \phi}$ = 7'-6" → LENGTH WILL EXTEND ONE-HALF PIPE ϕ ABOVE IF ON OPPOSITE BANK (MIN. 36") OR A MINIMUM OF 8-PIPE ϕ TOWARDS OPPOSITE BANK OF CHANNEL, WHICH EVER IS THE LESSER.

Δ : PROP. 24" TO 42" $\Delta = 15^\circ$
 PROP. 48" AND LARGER $\Delta = 30^\circ$
 H: FOR PIPE SIZES 24" TO 42"
 H=3" MAX. AND 1" MIN.
 FOR PIPE SIZES 48" AND LARGER
 H=1" MAX. AND MIN.

[illegible]

PLOT TIME



- GENERAL CONSTRUCTION NOTES:
1. CONCRETE CAST WALLS SHALL HAVE #4 REBAR PLACED @ 12" C-C E-W.
 2. GRATE LID IS EAST JORDAN IRON-WORKS OR APPROVED EQUAL.

REFER TO:

1. GENERAL NOTES, C.S. & CONCRETE NOTES.
2. STORM SEWER NOTES

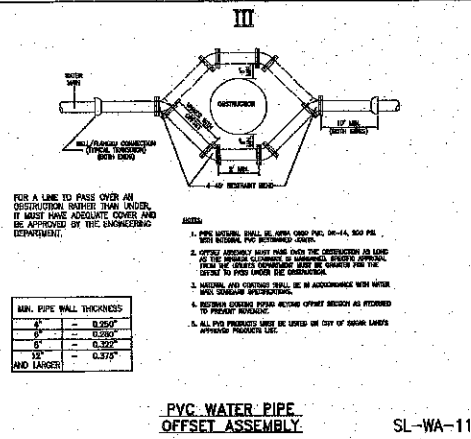
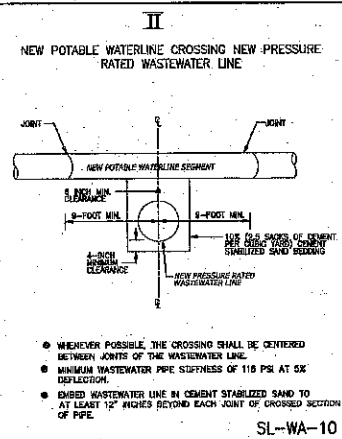
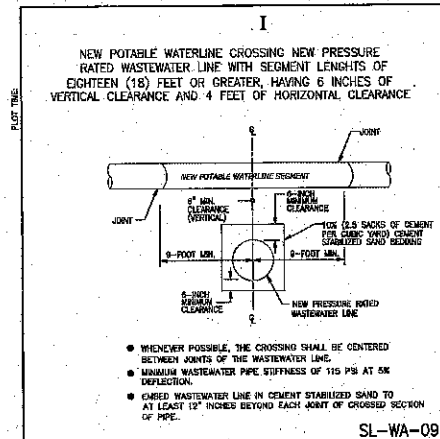
Costello

TYPE FIRM REG. No. 280
TGPLS FIRM REG. No. 100486

SL-DR-23

<p>CITY OF SUGAR LAND, TEXAS ENGINEERING DEPARTMENT</p>		
<p>CONSTRUCTION PLAN FOR EAST SUGARLAND WAY (RECLAIMED EFFLUENT) 22-USED WATER LINE</p>		
<p>STORM SEWER INLET CONSTRUCTION DETAILS I</p>		
<p>DATE: 10-27-18</p> <p>DESIGNED BY: [Signature]</p> <p>CHECKED BY: [Signature]</p>	<p>SL-07</p> <p>Sheet 30 of 36</p>	<p>12/14/18</p>

CAD FILE PATH:
PLOT DATE:



PLOT TIME:

- [illegible]

1. THE CONTRACTOR SHALL PROVIDE AN APPROPRIATE NUMBER OF PORTABLE TOILETS BASED ON THE NUMBER OF EMPLOYEES USING THE TOILETS AND THE TYPE OF WORK TO BE PERFORMED.
2. SANITARY FACILITIES SHALL BE PLACED ON A MINIMUM OF 50 FEET AWAY FROM ALL EXISTING OR PROPOSED CONSTRUCTION MATERIALS. IF UNABLE TO MEET THE 50 FOOT REQUIREMENT DUE TO SITE CONFIGURATION, PORTABLE TOILETS SHALL BE A MINIMUM OF 30 FEET AWAY FROM ALL EXISTING OR PROPOSED CONSTRUCTION MATERIALS.
3. PORTABLE TOILETS SHALL BE MAINTAINED IN A CLEAN AND HYGIENIC CONDITION AND SECONDARY CONTAINMENT SHALL BE PROVIDED IN CASE OF SPILLS.
4. THE USE OF PORTABLE TOILETS SHALL BE LIMITED TO PERSONNEL PERFORMING MAINTENANCE TASKS WITHOUT CAUSING EROSION AND SEDIMENT CONTROLS TO BE VIOLATED.
5. SANITARY FACILITIES SHALL BE FULLY EQUIPPED AND DESIGNED IN A MANNER THAT MINIMIZES THE EXPOSURE OF SANITARY WASTE TO PESTIFICATION AND AIRBORNE DROPLET TRANSPORT.
6. WHEN BIRDS ARE EXPECTED, PORTABLE TOILETS SHALL BE ANCHORED TO PREVENT WIND-UP AND TO PREVENT BIRDS FROM ENTERING.
7. THE COMPANY THAT SUPPLIES AND MAINTAINS THE PORTABLE TOILETS SHALL BE NOTIFIED IMMEDIATELY IF A TOILET IS TIPPED OVER OR DAMAGED. THE COMPANY SHALL BE RESPONSIBLE FOR REMOVAL OF THE MATERIAL AND BE VACILLATED INTO A SPECIFIC TRUCK BY THE COMPANY THAT MAINTAINS THE TOILETS.
8. THE OPERATOR OF THE MUNICIPAL SEWAGE TREATMENT PLANT (MSWTP) SHALL BE NOTIFIED IMMEDIATELY IF A TOILET IS TIPPED OVER OR DAMAGED. THE OPERATOR SHALL REMOVE THE TOILET FROM THE PORTABLE TOILET ENCLAVE, THE MSWTP OR A NEARBY CHANNEL.
9. SANITARY FACILITIES SHALL NOT BE PERMITTED ON PUBLIC SENSITIVE AREAS.

1. ALL WASTE SOURCES AND STORAGE AREAS SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM INLETS, STREAMS, DRAINAGE SWAYS, CHANNELS AND OTHER RECEIVING BODIES OF WATER. WASTE SOURCES AND STORAGE AREAS SHALL BE SO SITED IN NO CASE SHALL MATERIAL AND WASTE SOURCES BE CLOSER THAN 250 FEET FROM INLETS, STREAMS, DRAINAGE SWAYS, CHANNELS, AND OTHER RECEIVING BODIES OF WATER. WASTE SOURCES SHALL BE SITED IN A MANNER THAT MINIMIZES ITS EXPOSURE TO PRECIPITATION AND STORMWATER RUNOFF.
2. WHENEVER POSSIBLE, MINIMIZE PRODUCTION OF DEBRIS AND TRASH. MINIMIZE DEBRIS AND TRASH BY PROVIDING PROPER DEBRIS AND TRASH STORAGE AND HANDLING PROCEDURES.
3. SEGREGATE POTENTIALLY HAZARDOUS WASTE FROM NON-HAZARDOUS WASTE AT ALL CONSTRUCTION SITE DEBRIS.
4. PROHIBIT LITTERING BY WORKERS AND VISITORS.
5. POLYMERIZE OR BALLY DRY CONCRETE AND MORTAR.
6. ENFORCE SOLID WASTE HANDLING AND STORAGE PROCEDURES.
7. IF POSSIBLE, RECYCLE CONSTRUCTION AND DEMOLITION DEBRIS SUCH AS WOOD, METAL AND CONCRETE.
8. 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.
9. ALL GENERAL CONSTRUCTION DEBRIS MUST BE HAULED TO A LICENSED CONSTRUCTION DEBRIS DISPOSAL SITE.
10. USE WASTE AND RECYCLING HAULERS/FACILITIES APPROVED BY THE LOCAL JURISDICTION.
11. CONSTRUCTION TRUCKS AND DRUMS FOR USE SUCH AS MULCH IS PREFERRED ALTERNATIVE TO OFFSITE DISPOSAL.
12. NO WASTE, TRASH, OR DEBRIS SHALL BE BURIED, BURNED OR OTHER WISE DISPOSED AT THE CONSTRUCTION SITE.
13. CLEARLY MARK ALL DEBRIS AND TRASH CONTAINERS BEARING THESE MATERIALS ARE ACCEPTABLE FORBID AND/OR CONSTRUCTION SUPERVISOR SHALL BE RESPONSIBLE FOR ENFORCEMENT OF THIS PROVISION.

- RECORDS OF RELEASES THAT EXCEEDED THE REPORTABLE QUANTITY (RQ) FOR OIL AND HAZARDOUS SUBSTANCES SHOULD BE MAINTAINED IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:
- 1. EMERGENCY CONTACT INFORMATION AND SPILL RESPONSE PROCEDURES SHALL BE AVAILABLE TO ALL PERSONNEL AND ALL SUBCONTRACTORS.
 - 2. ALL CONTAINMENT MATERIALS SHOULD BE MAINTAINED FOR PETROLEUM PRODUCTS AND "CONTAMINATED" CHEMICALS THAT ARE REGULARLY OBTAINED. MATERIALS IN KITS SHOULD BE BASED ON CONTAINMENT GUIDELINES IN THE NATIONAL SAFETY COUNCIL'S HAZARDOUS MATERIAL RESPONSE GUIDE.
 - 3. SPILL KITS ARE REQUIRED FOR REPORTS TO SMALL SPOILS, TYPICALLY LESS THAN 100 GALLONS.
 - 4. SIGNIFICANT SPILLS OR OTHER RELEASES WARRANT IMMEDIATE RESPONSE BY THE CONTRACTOR.
 - 5. DISPOSED, USE-SITE CONTAMINATION SHOULD BE IMMEDIATELY REPORTED TO THE CONTRACTOR.
 - 6. THE CONTRACTOR SHOULD BE REQUIRED TO DESIGNATE A SITE SUPERVISOR, FURNISH A SPILL RESPONSE KIT, AND DESIGNATE A PERSON (S) AND MUST HAVE KNOWLEDGE OF AND BE TRAINED IN CORRECT SPILL RESPONSE PROCEDURES.

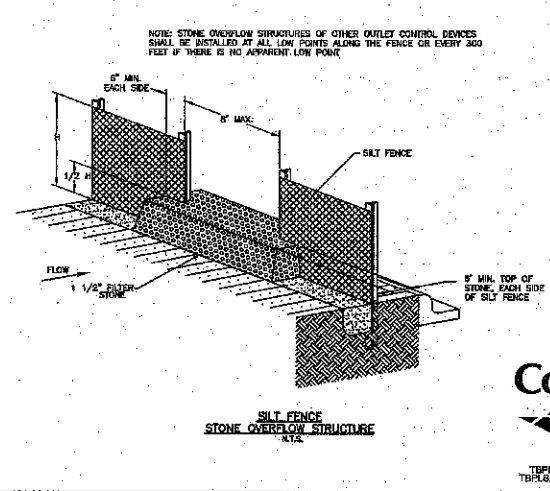
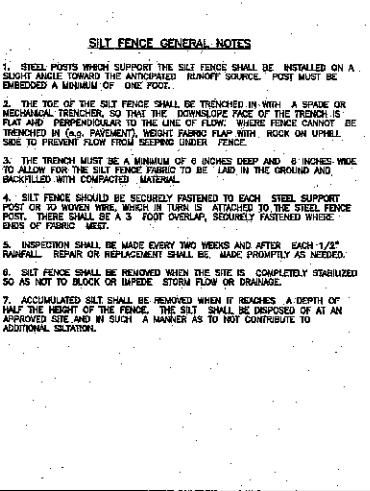
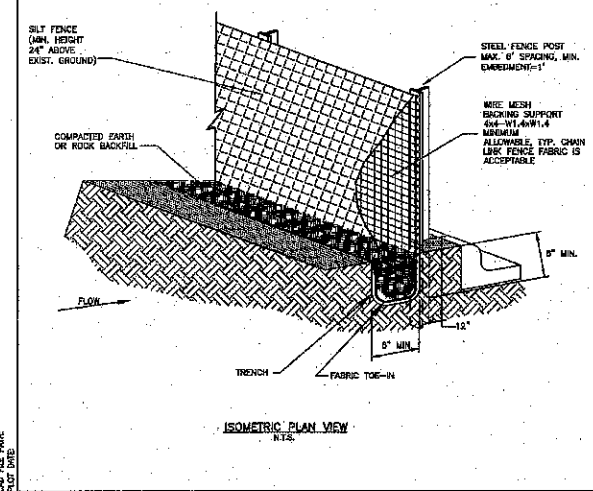
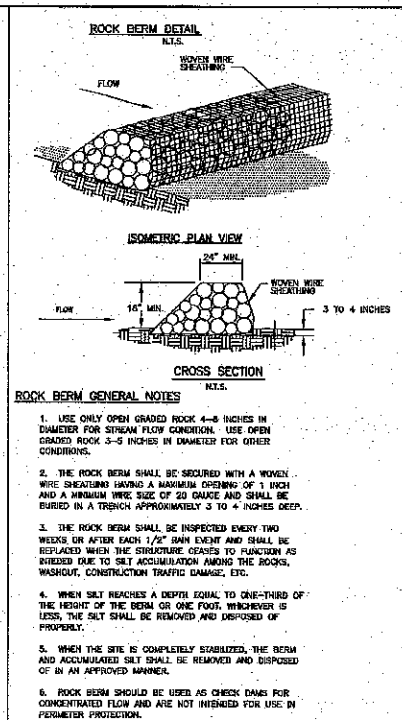
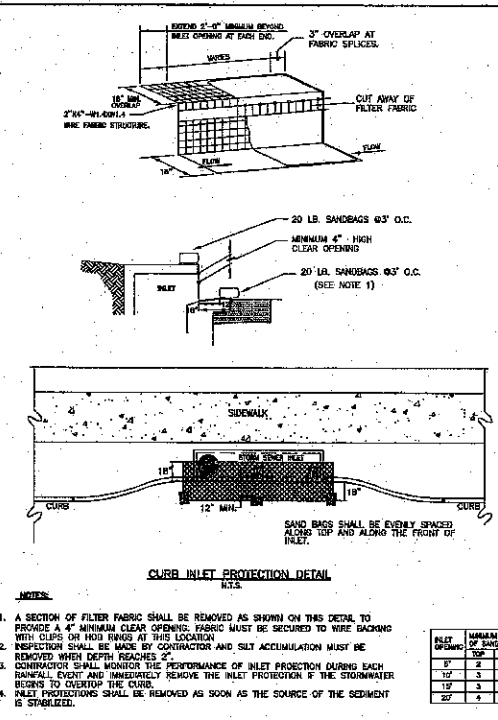
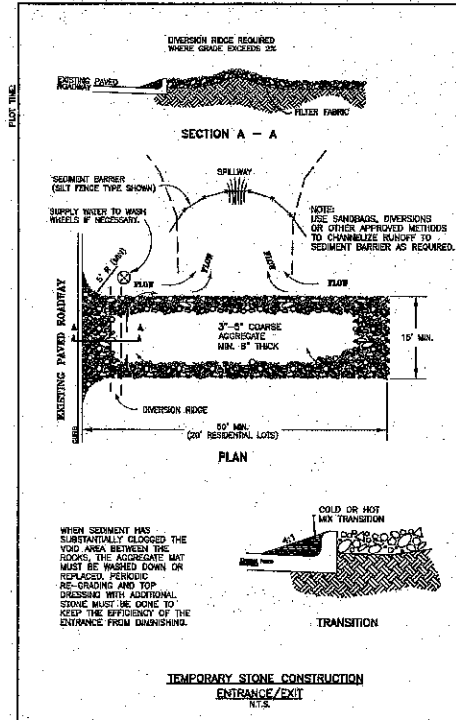
1. MINIMIZE THE DISCHARGE OF THE CHEMICAL STABILIZERS BY THE CONTRACTOR. LIMITING THE AMOUNT OF STABILIZERS ADDED ONSITE TO THAT REQUIRED TO STABILIZE THE EXPOSED SURFACE OF EACH WHEEL TRACK.
2. STABILIZERS SHALL BE APPLIED AT RATES THAT RESULT IN NO RUN OFF. STABILIZATION SHALL NOT OCCUR IMMEDIATELY BEFORE AND DURING RAINFALL.
3. NO TRAFFIC OTHER THAN WATER TRUCKS AND MIXING EQUIPMENT SHALL BE ALLOWED TO ENTER THE STABILIZED ZONE UNTIL AFTER COMPLETION OF MIXING THE CHEMICAL.
4. AREA AROUND AND DOWNSTREAM OF STABILIZED SHALL BE PROTECTED FROM EROSION BY THE REDUCED FLOW VELOCITY.
5. ADEQUATE FABRICS SUCH AS THOSE USED FOR SIL FENCE SHOULD NOT BE USED TO TRAP CHEMICAL RUNOFF. BECAUSE THE CHEMICALS ARE HIGHLY SOLUBLE, THEY WILL BE WASHED AWAY BY THE WATER AND THE SUSPENDED SOLIDS ARE SIGNIFICANTLY SMALLER THAN THE APPARENT SIZE OF THE CHEMICALS.
6. IF SOIL STABILIZERS ARE STORED INSITE, THEY SHALL BE CONSIDERED HAZARDOUS MATERIALS AND SHALL BE MANAGED ACCORDING TO THE FEDERAL REGULATIONS OF THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES.
7. THE CONTRACTOR SHALL INSTALL BMP'S TO ALL INLETS AND OPENINGS CONNECTED TO THE STORM SEWER SYSTEMS TO PREVENT LEAK FROM THE STORM SEWER SYSTEM.

TBPE FIRM REG. No. 280
 TBPLS FIRM REG. No. 100488

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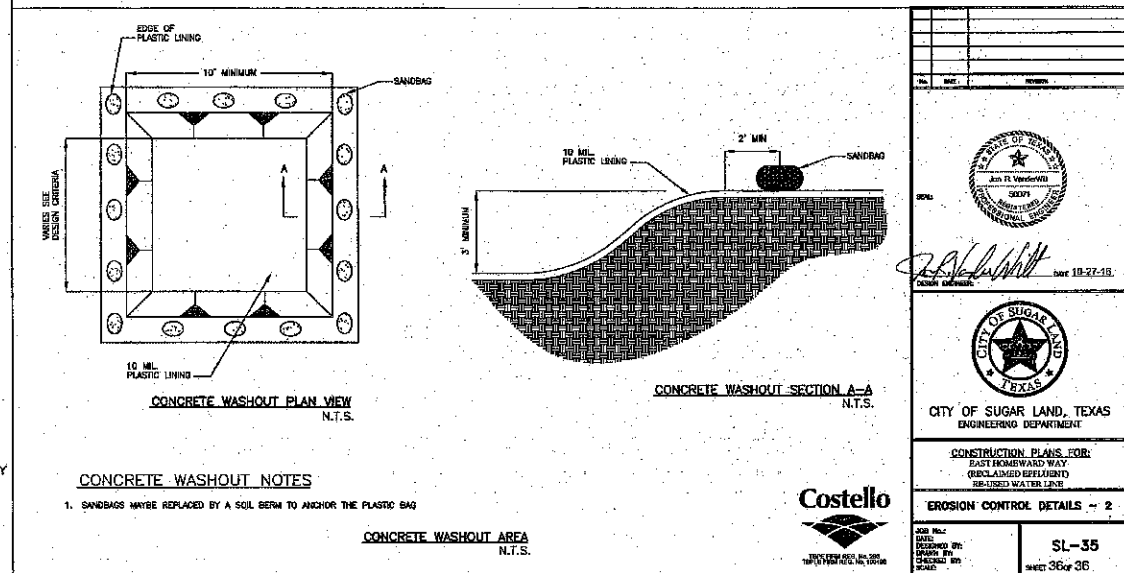
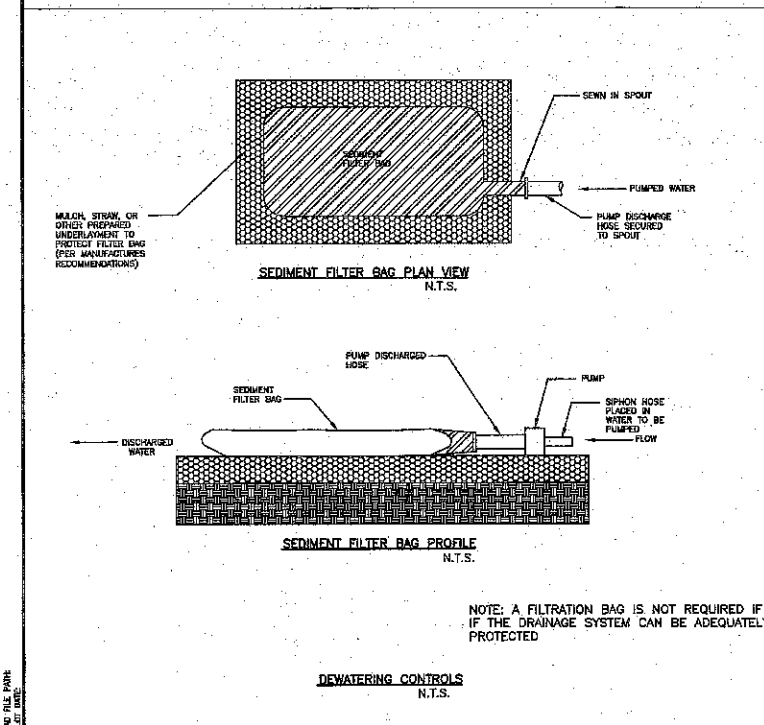
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TYPE FIRM REG. No. 280
TRUST FIRM REG. No. 100489

CITY OF SUGAR LAND, TEXAS ENGINEERING DEPARTMENT	
CONSTRUCTION PLANS FOR: EAST HONORABLE WAY (DUBLAINE EXTENSION) REQUIRED WATER LINE	
EROSION CONTROL DETAILS - 1	
JOB No. DESIGNED BY CHECKED BY DATE	SL-34 10/27/18 35x36



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