

**REVIEW BY FORT BEND COUNTY COMMISSIONERS COURT**

On this 8th day of March, 2016, Commissioners Court came on to be heard and reviewed the accompanying notice of LECON, Inc.

Job Location 2534 Windswept Drive, Richmond, TX 77406

Date 2/22/2016 Bond No. no bond required, Permit No. 2016-5638 to make use of certain Fort Bend County property subject to, "A Revised 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 the 3rd day of August, 1987, recorded in Volume \_\_\_\_\_ of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistent with Article 1436a, Vernon's Texas Civil Statutes. Upon Motion of Commissioner \_\_\_\_\_, seconded by Commissioner \_\_\_\_\_, 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.

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

Mail notices to: Permit Administrator  
Fort Bend County Engineering  
301 Jackson Street  
Richmond, Texas 77469  
281-633-7500

3. This permit expires one (1) year from date of permit if construction has not commenced.

By: *C. Charles O. Ady*  
for County Engineer

Presented to Commissioners Court and approved.  
Recorded in Volume \_\_\_\_\_

By: N/A  
Drainage District Engineer/Manager

Minutes of Commissioners Court

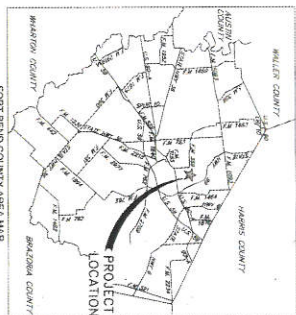
Clerk of Commissioners Court

By: \_\_\_\_\_  
Deputy





# CONSTRUCTION OF THE GROVE 4 & 5 DRAINAGE IMPROVEMENTS IN FORT BEND COUNTY, TEXAS FOR PECAN GROVE MUNICIPAL UTILITY DISTRICT



CALL BEFORE YOU DIG!!  
TEXAS 811 (800 TESS)  
LONE STAR NOTIFICATION CENTER  
1-800-800-8000



**BID SET ONLY**  
NOT FOR CONSTRUCTION

DATE: 12/16/14  
APPROVED: [Signature]  
FOR LONE STAR NOTIFICATION CENTER

PECAN GROVE MUNICIPAL UTILITY DISTRICT

NOVEMBER 2014

**JONES & CARTER, INC.**  
ENGINEERS • PLANNERS • SURVEYORS

JONES & CARTER, INC. PROJECT NUMBER 00034-0366-01  
NOVEMBER 2014

PECAN GROVE MUNICIPAL UTILITY DISTRICT ENGINEER  
DATE: 11-4-14

DATE: 12/16/14  
APPROVED: [Signature]  
FOR LONE STAR NOTIFICATION CENTER

**JONES & CARTER, INC.**  
ENGINEERS • PLANNERS • SURVEYORS

PECAN GROVE MUNICIPAL UTILITY DISTRICT – THE GROVE 4 & 5 DRAINAGE IMPROVEMENTS

## INDEX OF DRAWINGS

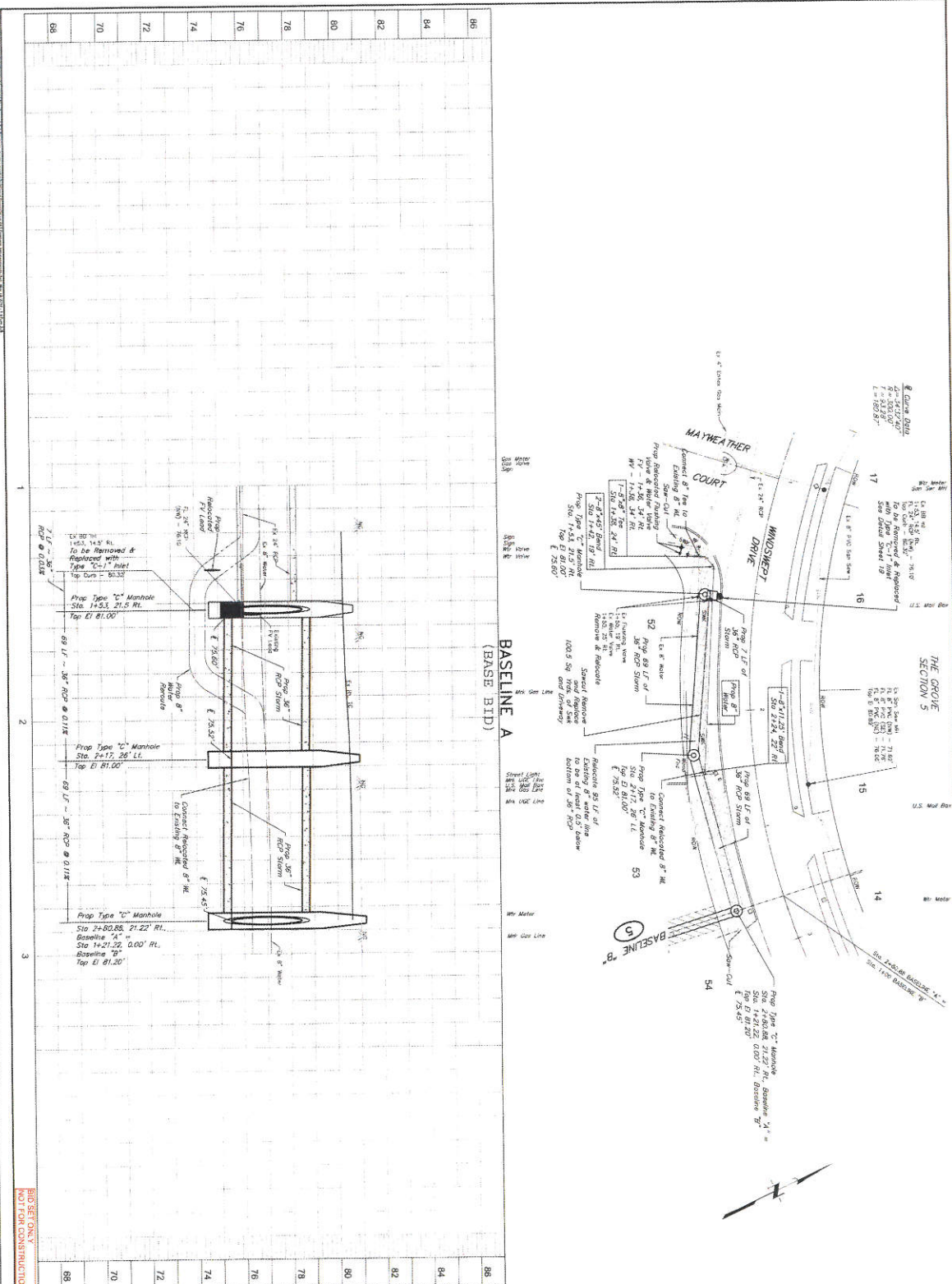
SHEET No.	TITLE	
1	COVER SHEET & INDEX	
2	PROJECT OVERALL & PREVENTION PREVENTION DETAILS	
3	CONSTRUCTION NOTES	
<b>PLAN &amp; PROFILE QUIPALL WATER</b>		
4	PLAN & PROFILE BASELINE A	STA 1+00 – 3+00
5	PLAN & PROFILE BASELINE B	STA 1+00 – 3+50
6	PLAN & PROFILE BASELINE C	STA 1+00 – 2+50
7	PLAN & PROFILE BASELINE D	STA 1+00 – 2+00
8	PLAN & PROFILE BASELINE E	STA 1+00 – 1+50
9	PLAN & PROFILE BASELINE F	STA 0+00 – 10+00
10	PLAN & PROFILE BASELINE G	STA 10+00 – 17+00
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12	PLAN & PROFILE BASELINE I	STA 10+00 – 20+00
13	PLAN & PROFILE BASELINE J	STA 20+00 – 40+00
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15	PLAN & PROFILE BASELINE L	STA 40+00 – 48+00
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17	PLAN & PROFILE BASELINE N	STA 62+00 – 74+00
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19	CITY OF RICHMOND STANDARD CONSTRUCTION DETAILS – STORM SEWER	
20	CITY OF RICHMOND STANDARD CONSTRUCTION DETAILS – SANITARY SEWER	
21	CITY OF RICHMOND STANDARD CONSTRUCTION DETAILS – PAVING I	
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CITY OF RICHMOND, TEXAS  
APPROVED BY: [Signature]

DATE: 11/24/14  
DATE: 11/21/14  
KELLY R. KALVA, P.E.  
NOTE: Approval/No-Action One Year From Date Signed. If Construction Has Not Begun.







**REVISIONS**

NO.	DATE	DESCRIPTION
1	12/2/14	ISSUED FOR PERMITS

**DATE:** 12/2/14

**APPROVED:** [Signature]

**SCALE:** 1" = 20'

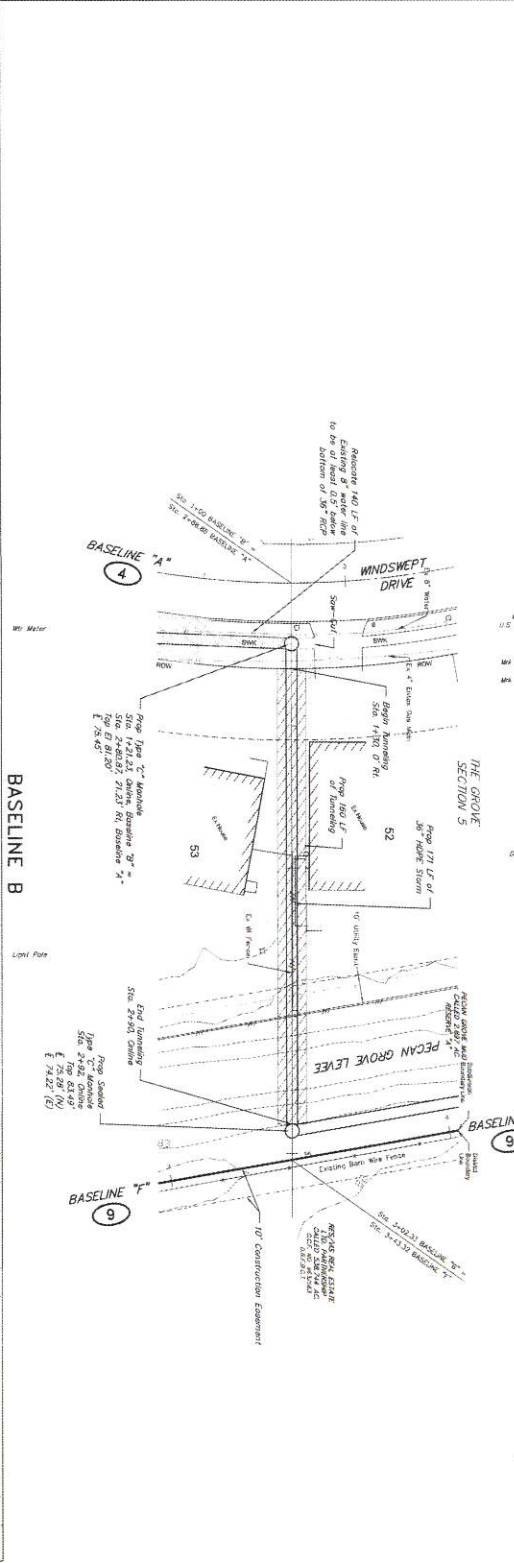
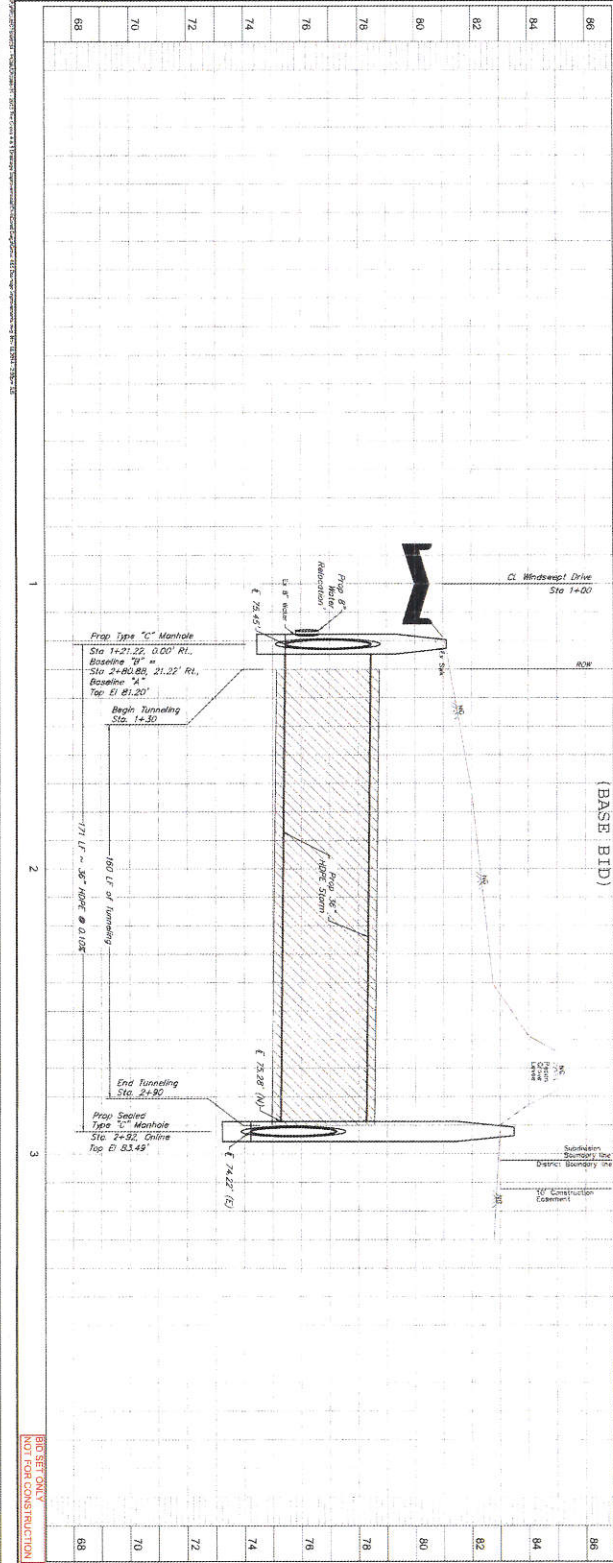
**PRIVATE UTILITY LINES SHOWN**

**THE GROVE 4 & B**  
**CHANGING IMPROVEMENTS**  
**PLAN & PROFILE**  
**BASELINE A**  
**STA 1+00 - 3+00**

**J.C. JONES & CARTER, INC.**  
 1400 W. 10th Street, Suite 100  
 Fort Worth, Texas 76102  
 Phone: (817) 336-1111  
 Fax: (817) 336-1112

**DALE W. JAYLOR**  
 ENGINEER  
 No. 1400 W. 10th Street, Suite 100  
 Fort Worth, Texas 76102  
 Phone: (817) 336-1111  
 Fax: (817) 336-1112

**NOT FOR CONSTRUCTION**



**SECTION 5**

THE GROVE

PEACAN GROVE LEVEE

WINDSWEEP DRIVE

Prop Type "C" Manhole

Sta 1+21.22, 0.00' RL

Baseline "B"

Sta 2+40.88, 21.22' RL

Baseline "A"

Top El 81.22'

Prop Scaled Type "C" Manhole

Sta 2+32.32, 0.00' RL

Top El 83.45'

171' L - 38" slope @ 0.10%

180' L of tunneling

171' L - 38" slope @ 0.10%

CL Windswep Drive Sta 1+00

Prop B

Prop A

Prop C

Prop D

Prop E

Prop F

Prop G

Prop H

Prop I

Prop J

Prop K

Prop L

Prop M

Prop N

Prop O

Prop P

Prop Q

Prop R

Prop S

Prop T

Prop U

Prop V

Prop W

Prop X

Prop Y

Prop Z

Prop AA

Prop AB

Prop AC

Prop AD

Prop AE

Prop AF

Prop AG

Prop AH

Prop AI

Prop AJ

Prop AK

Prop AL

Prop AM

Prop AN

Prop AO

Prop AP

Prop AQ

Prop AR

Prop AS

Prop AT

Prop AU

Prop AV

Prop AW

Prop AX

Prop AY

Prop AZ

Prop BA

Prop BB

Prop BC

Prop BD

Prop BE

Prop BF

Prop BG

Prop BH

Prop BI

Prop BJ

Prop BK

Prop BL

Prop BM

Prop BN

Prop BO

Prop BP

Prop BQ

Prop BR

Prop BS

Prop BT

Prop BU

Prop BV

Prop BV

Prop BW

Prop BX

Prop BY

Prop BZ

Prop CA

Prop CB

Prop CC

Prop CD

Prop CE

Prop CF

Prop CG

Prop CH

Prop CI

Prop CJ

Prop CK

Prop CL

Prop CM

Prop CN

Prop CO

Prop CP

Prop CQ

Prop CR

Prop CS

Prop CT

Prop CU

Prop CV

Prop CW

Prop CX

Prop CY

Prop CZ

Prop DA

Prop DB

Prop DC

Prop DD

Prop DE

Prop DF

Prop DG

Prop DH

Prop DI

Prop DJ

Prop DK

Prop DL

Prop DM

Prop DN

Prop DO

Prop DP

Prop DQ

Prop DR

Prop DS

Prop DT

Prop DU

Prop DV

Prop DW

Prop DX

Prop DY

Prop DZ

Prop EA

Prop EB

Prop EC

Prop ED

Prop EE

Prop EF

Prop EG

Prop EH

Prop EI

Prop EJ

Prop EK

Prop EL

Prop EM

Prop EN

Prop EO

Prop EP

Prop EQ

Prop ER

Prop ES

Prop ET

Prop EU

Prop EV

Prop EW

Prop EX

Prop EY

Prop EZ

Prop FA

Prop FB

Prop FC

Prop FD

Prop FE

Prop FF

Prop FG

Prop FH

Prop FI

Prop FJ

Prop FK

Prop FL

Prop FM

Prop FN

Prop FO

Prop FP

Prop FQ

Prop FR

Prop FS

Prop FT

Prop FU

Prop FV

Prop FW

Prop FX

Prop FY

Prop FZ

Prop GA

Prop GB

Prop GC

Prop GD

Prop GE

Prop GF

Prop GG

Prop GH

Prop GI

Prop GJ

Prop GK

Prop GL

Prop GM

Prop GN

Prop GO

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Prop GU

Prop GV

Prop GW

Prop GX

Prop GY

Prop GZ

Prop HA

Prop HB

Prop HC

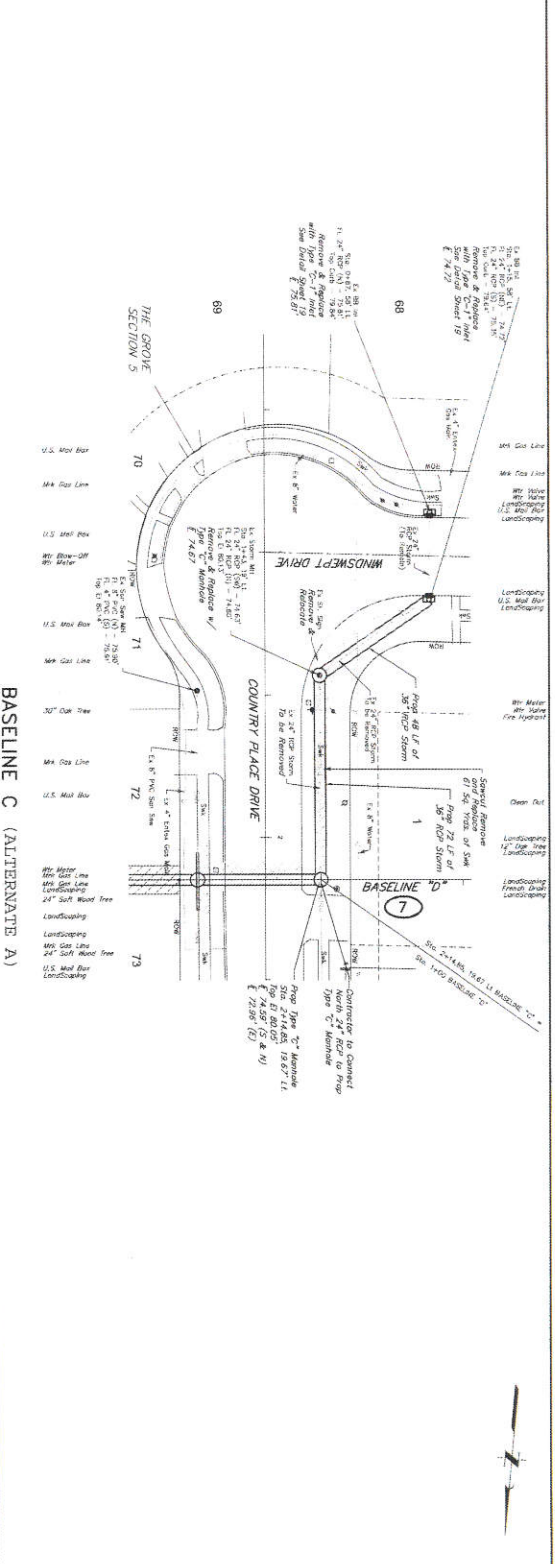
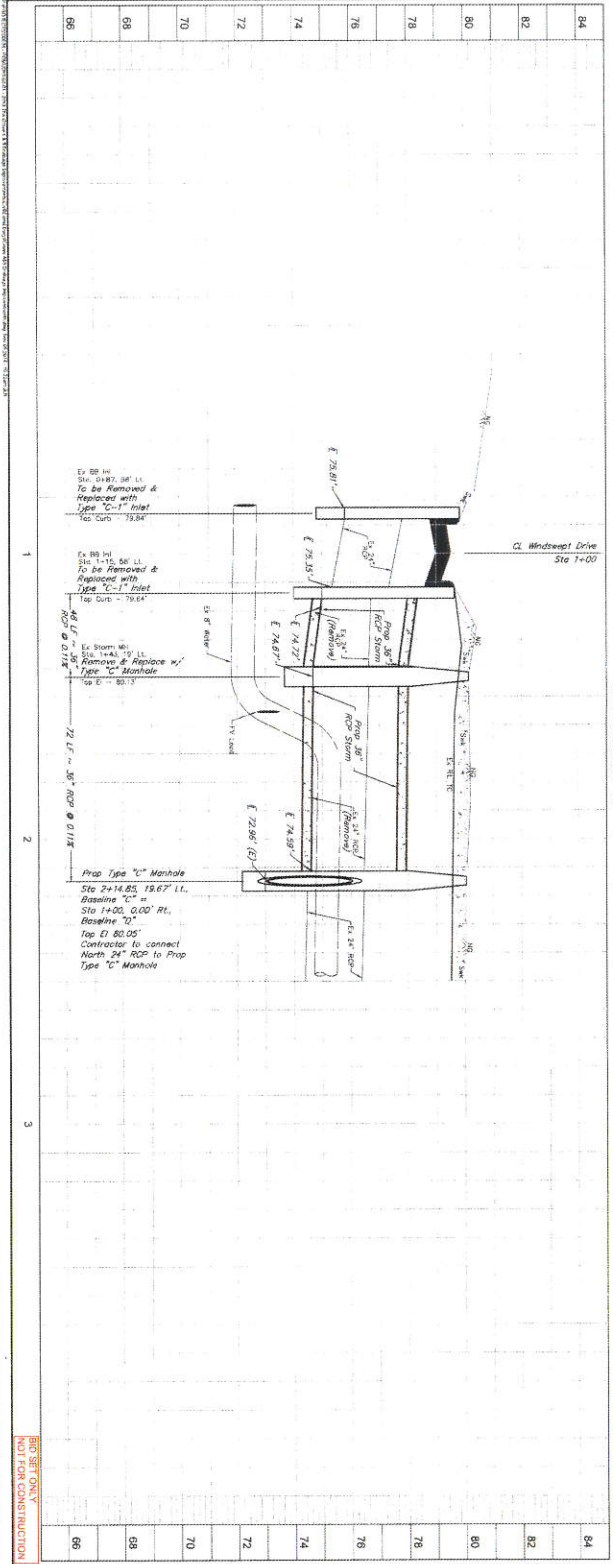
Prop HD

Prop HE

Prop HF

Prop HG

Prop HH



**NOT SET ONLY  
NOT FOR CONSTRUCTION**

84  
82  
80  
78  
76  
74  
72  
70  
68  
66

1 2 3

**THE GROVE A & B  
DRAINAGE IMPROVEMENTS  
PLAN & PROFILE  
BASELINE C  
STA 1+00 - 2+50**

**J.P. JONES & COMPANY  
ENGINEERS - PLANNERS - SURVEYORS**  
1901 Westinghouse Building, Phoenix, Arizona 85004  
PHOENIX, ARIZONA

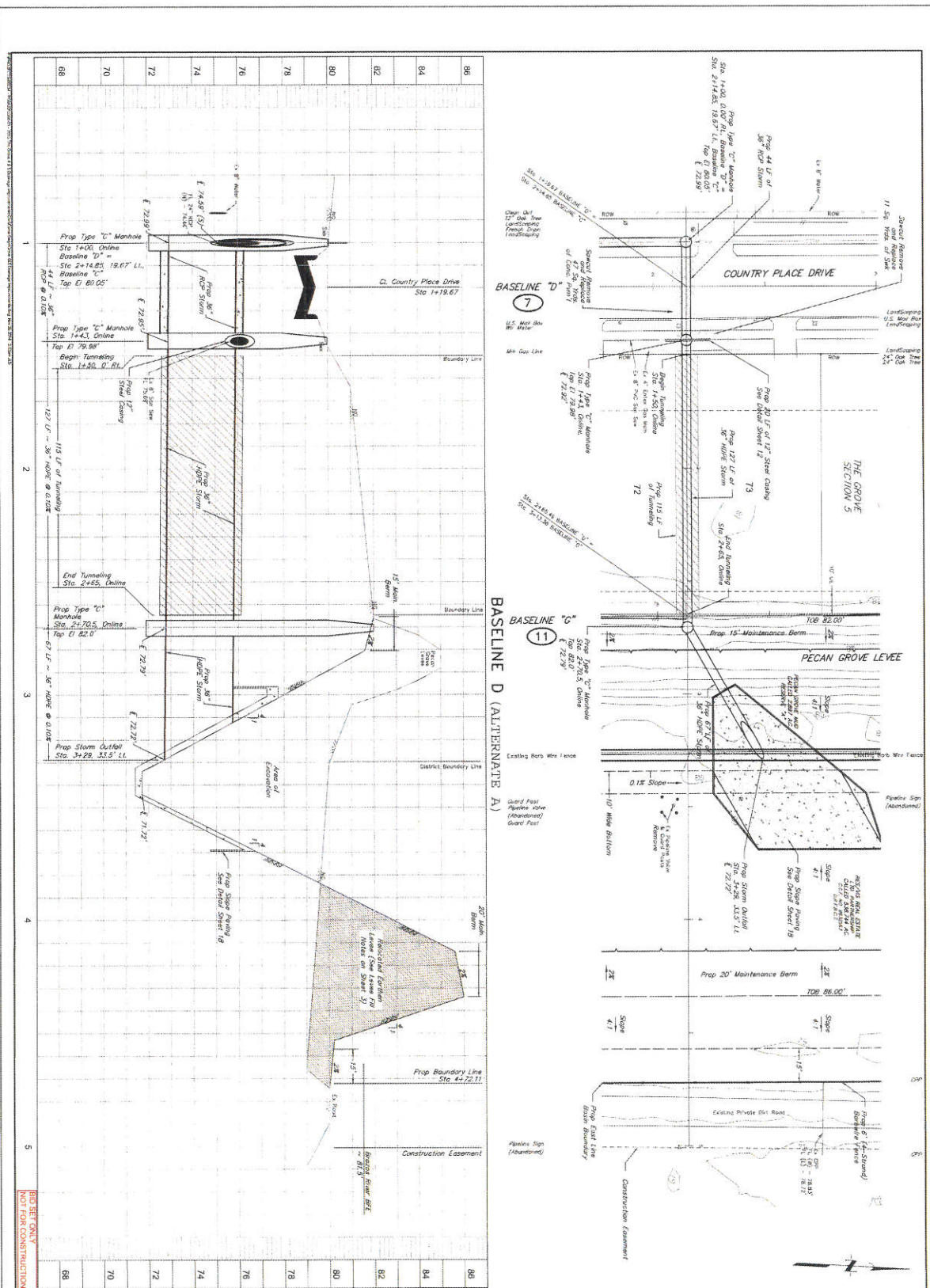
DATE: 1-20-78  
DRAWN BY: GSK, JAB  
CHECKED BY: GSK, JAB  
SUBMITTED

PECAH GROVE MUNICIPAL UTILITY DISTRICT  
HIGH BIRD COUNTY, TEXAS

APPROVED: *[Signature]*  
DATE: 1/27/78

SCALE: 1" = 20'  
1" = 40'

**NOTES:**  
1. ALL DIMENSIONS ARE IN FEET AND DECIMALS THEREOF.  
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES.  
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES AND STRUCTURES.  
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL ADJACENT PROPERTIES.  
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL AREAS TO ORIGINAL OR BETTER CONDITION.  
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION DETAILS.  
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION SCHEDULES.  
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION REPORTS.  
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION RECORDS.  
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION AS-BUILT RECORDS.



**REVISIONS**

NO.	DATE	DESCRIPTION
1	12/21/14	ISSUED FOR PERMITS

**NOTES**

1. ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.
2. ALL UTILITIES SHOWN ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY.
3. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF FORT BRAG ORDINANCES.
4. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE STATE OF TEXAS REGULATIONS.
5. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE FEDERAL REGULATIONS.

**DATE:** 12/21/14

**APPROVED:** [Signature]

**PROJECT:** PRIVATE UTILITY LINES SHOWN  
 FORT BRAG COUNTY, TEXAS  
 THE GROVE A & S  
 DRAINAGE IMPROVEMENTS  
 BASELINE D  
 STA 1+00 - 5+00

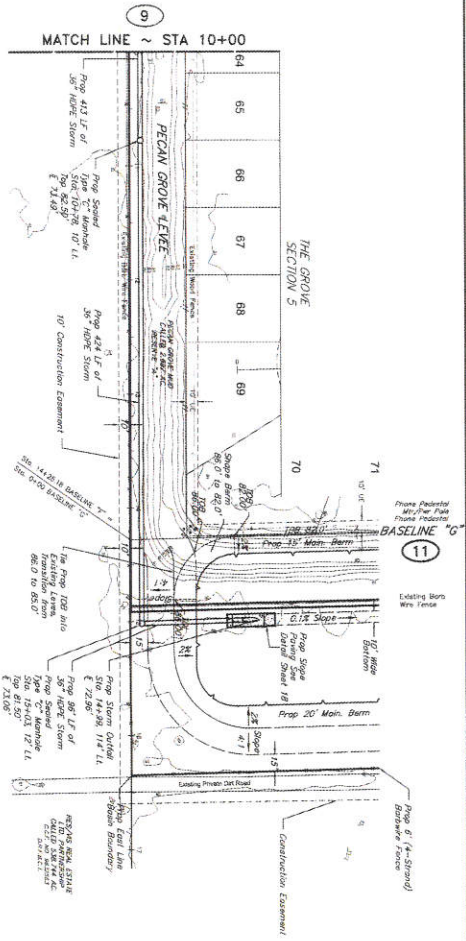
**JONES & CARTER**  
 ENGINEERS & ARCHITECTS  
 1000 N. W. 10th St., Suite 100  
 Ft. Lauderdale, FL 33304  
 Phone: (954) 571-1111  
 Fax: (954) 571-1112  
 Website: www.jonesandcarter.com

**DRIVE IN UNDER**

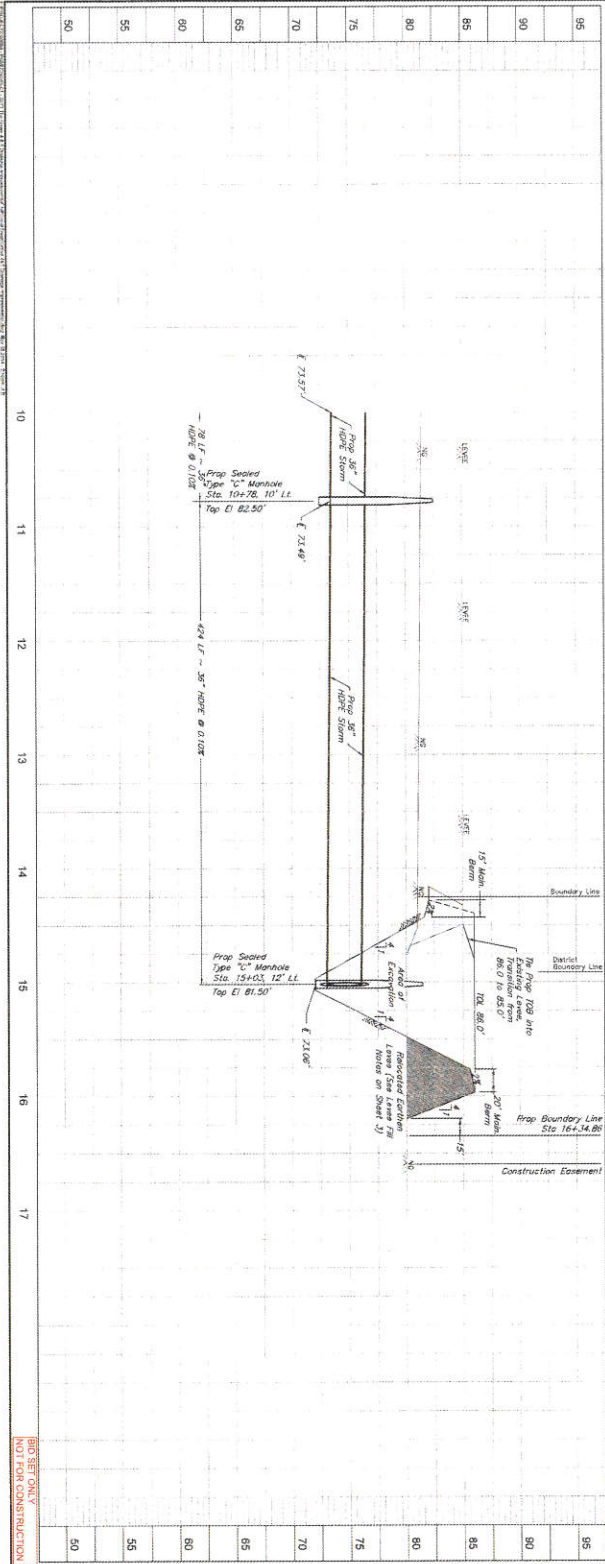
**NO SET ONLY**  
 NOT FOR CONSTRUCTION







BASELINE F (BASE B1D)



BIO SECTION  
NOT FOR CONSTRUCTION

**REVISIONS**

NO. 1: AS SHOWN

NO. 2: AS SHOWN

NO. 3: AS SHOWN

NO. 4: AS SHOWN

NO. 5: AS SHOWN

NO. 6: AS SHOWN

NO. 7: AS SHOWN

NO. 8: AS SHOWN

NO. 9: AS SHOWN

NO. 10: AS SHOWN

**TABLE A**  
CONSTRUCTION PROTECTION OF UTILITIES

DATE: 11/2/14

SCALE: 1" = 40'

DATE: 11/2/14

SCALE: 1" = 40'

**TABLE B**  
CONSTRUCTION PROTECTION OF UTILITIES

DATE: 11/2/14

SCALE: 1" = 40'

DATE: 11/2/14

SCALE: 1" = 40'

**JONES & CARTER**  
ENGINEERS-PLANNERS-ARCHITECTS

1411 Highway 101, Suite 100, Houston, TX 77057  
Tel: 281.462.1000 Fax: 281.462.1001

PROJECT: THE GROVE 4 & 5  
DRAWING: DRAINAGE IMPROVEMENTS  
PLAN & PROFILE  
BASELINE F  
STA 10+00 - 17+00

DATE: 11/2/14

SCALE: 1" = 40'

DATE: 11/2/14

SCALE: 1" = 40'

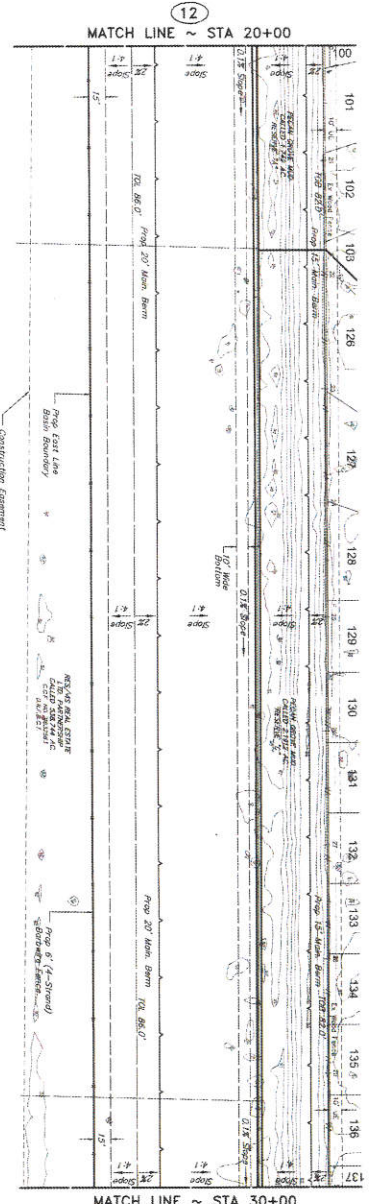




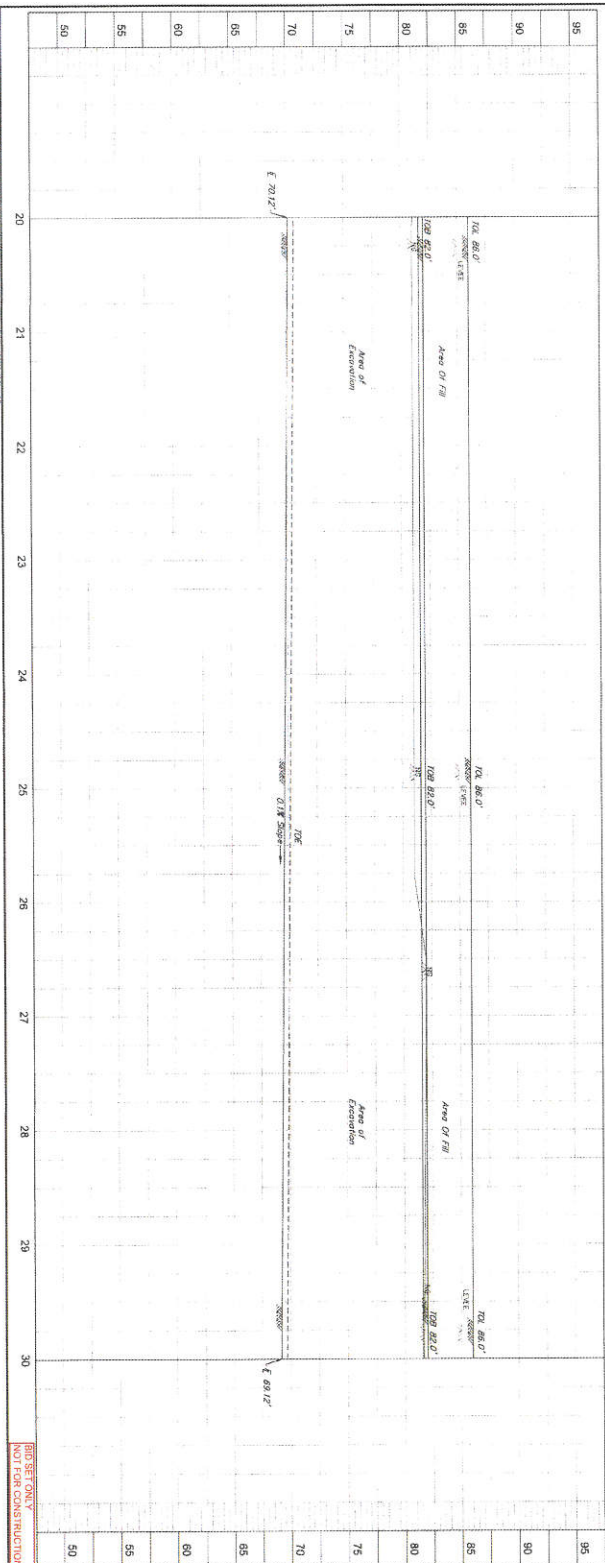


THE GROVE  
SECTION 4  
V.D. 24, C.V. 2

THE GROVE  
SECTION 10  
V.D. 24, C.V. 2



BASELINE G (BASE BID)



**BENCHMARK**  
NOTED: BENCHMARK IS 100.00. Base Copy is Top of New End of the NE 1/4 Section of a Concrete Bridge Under Elevation 100.00. The Benchmarks are Located at Station 100+00 and 1+00.00. NE 1/4 Section of the NE 1/4 34th and 1+00.00. NE 1/4 Section of the NE 1/4 34th  
Elevation = 82.54 (D.A.M. 86)

**T.M.M. 10'**  
200' LONG BY 10' WIDE OF THE INTERSECTION OF ANY WATERWAY  
SECTION - 10' x 10'  
ELEVATION - 100'  
D.A.M. 86

**T.M.M. 12'**  
200' LONG BY 12' WIDE OF THE INTERSECTION OF ANY WATERWAY  
SECTION - 12' x 12'  
ELEVATION - 100'  
D.A.M. 86

**T.M.M. 15'**  
200' LONG BY 15' WIDE OF THE INTERSECTION OF ANY WATERWAY  
SECTION - 15' x 15'  
ELEVATION - 100'  
D.A.M. 86

**T.M.M. 18'**  
200' LONG BY 18' WIDE OF THE INTERSECTION OF ANY WATERWAY  
SECTION - 18' x 18'  
ELEVATION - 100'  
D.A.M. 86

**NOTE:**  
THIS PLAN AND PROFILE ARE FOR THE PROPOSED DRAINAGE IMPROVEMENTS TO THE PROJECT AREA. THE EXISTING DRAINAGE SYSTEM IS SHOWN FOR REFERENCE ONLY. THE PROPOSED IMPROVEMENTS ARE SUBJECT TO THE REVIEW AND APPROVAL OF THE LOCAL GOVERNMENT AND THE STATE DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT AND THE STATE DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT AND THE STATE DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY.

APPROVED: *[Signature]*  
DATE: 2/2/19

0' 10' 20' 30' 40' 50'  
SCALE: 1" = 20'

PRIVATE UTILITY LINES SHOWN  
AS LOCATED BY FIELD SURVEY OR AS SHOWN ON RECORD PLANS.

CONSTRUCTION SPECIFICATIONS  
SECTION 02100 - EXCAVATION AND FOUNDATION  
SECTION 02200 - CONCRETE  
SECTION 02300 - MASONRY  
SECTION 02400 - METAL STRUCTURES  
SECTION 02500 - WOOD STRUCTURES  
SECTION 02600 - ROOFING  
SECTION 02700 - INTERIORS  
SECTION 02800 - EXTERIORS  
SECTION 02900 - PAINTS AND COATINGS  
SECTION 03100 - IRON AND STEEL FABRICATED STRUCTURES  
SECTION 03200 - ALUMINUM FABRICATED STRUCTURES  
SECTION 03300 - GLASS CURTAIN WALLS  
SECTION 03400 - GLASS ENCLOSURES  
SECTION 03500 - GLASS PARTITIONS  
SECTION 03600 - GLASS DOORS  
SECTION 03700 - GLASS WINDOWS  
SECTION 03800 - GLASS SKYLIGHTS  
SECTION 03900 - GLASS RAILINGS  
SECTION 04000 - GLASS BALUSTRADES  
SECTION 04100 - GLASS SIGNAGE  
SECTION 04200 - GLASS FENCES  
SECTION 04300 - GLASS PARTITIONS  
SECTION 04400 - GLASS DOORS  
SECTION 04500 - GLASS WINDOWS  
SECTION 04600 - GLASS SKYLIGHTS  
SECTION 04700 - GLASS RAILINGS  
SECTION 04800 - GLASS BALUSTRADES  
SECTION 04900 - GLASS SIGNAGE  
SECTION 05000 - GLASS FENCES

THE GROVE 4 & 5  
DRAINAGE IMPROVEMENTS  
PLAN & PROFILE  
BASELINE G  
STA 20+00 - 30+00

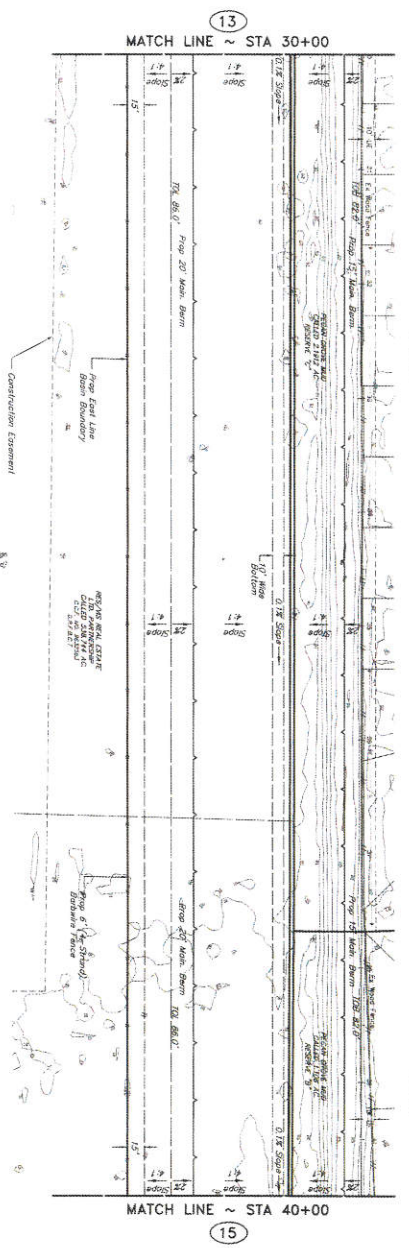
J.C. LONESTAR ENTERPRISES  
11111 Highway 101, Suite 100  
Houston, Texas 77036  
Phone: 281-410-1111  
Fax: 281-410-1112  
www.jclonestar.com

DESIGN BY: C.E.L. JLB  
DATE: NOVEMBER 2018  
SCALE: AS SHOWN  
JOB NO: 2018-0088-01  
SHEET NO: 13  
TOTAL SHEETS: 24

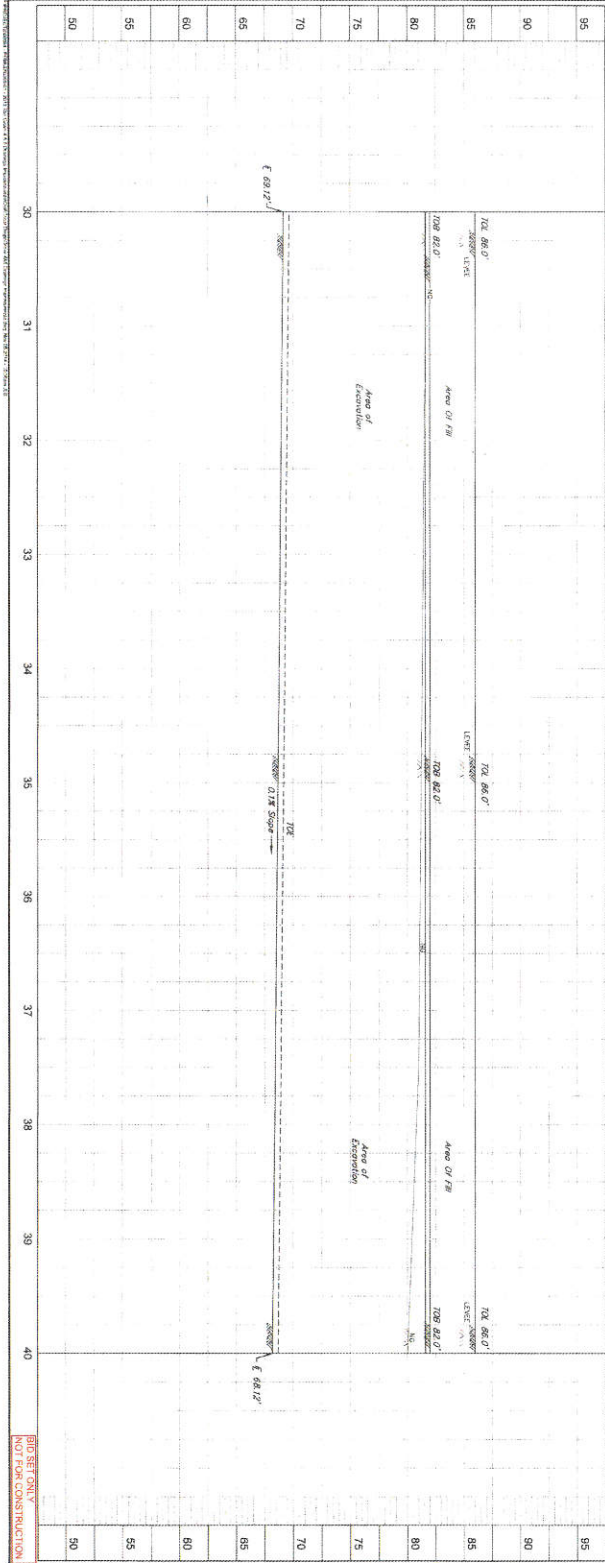
DESIGNED FOR CONSTRUCTION

THE GROVE  
SECTION 3  
VOL. 12, C.D. 10

THE GROVE  
SECTION 9  
VOL. 12, C.D. 10



BASELINE G (BASE BID)



**BENCHMARK**  
NAD 83  
Elevation = 42.87' (NAD 83)

**T.M.M. 10'**  
CONSTRUCTION EASEMENT  
AREA OF EXCAVATION  
AREA OF FILL

**NOTE:** THIS PLAN AND PROFILE ARE THE PROPERTY OF THE ENGINEER AND ARE NOT TO BE REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. THE ENGINEER ASSUMES NO LIABILITY FOR ANY DAMAGE OR INJURY TO PERSONS OR PROPERTY ARISING FROM THE USE OF THIS PLAN AND PROFILE.

APPROVED: *[Signature]*  
DATE: 12/2/14  
SERVIRONMENT CORPORATION

SCALE: 1" = 20'  
1" = 50'

**PRIVATE UTILITY LINES SHOWN**  
AS SHOWN ON THE PLAN AND PROFILE ARE NOT TO BE CONSIDERED AS GUARANTEED. THE ENGINEER ASSUMES NO LIABILITY FOR ANY DAMAGE OR INJURY TO PERSONS OR PROPERTY ARISING FROM THE USE OF THIS PLAN AND PROFILE.

THE GROVE 4 & S  
DRAINAGE IMPROVEMENTS  
PLAN & PROFILE  
BASELINE G  
STA 30+00 - 40+00

**J. JONES & PARTNERS**  
REGISTERED PROFESSIONAL ENGINEERS  
11111 N. CENTRAL EXPRESSWAY, SUITE 100  
DALLAS, TEXAS 75243  
PHONE: 972-440-1111  
FAX: 972-440-1112

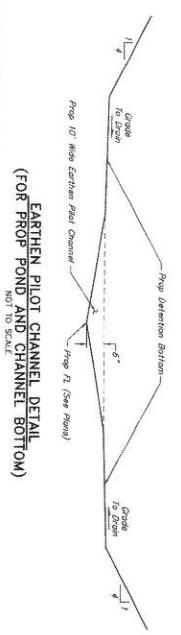
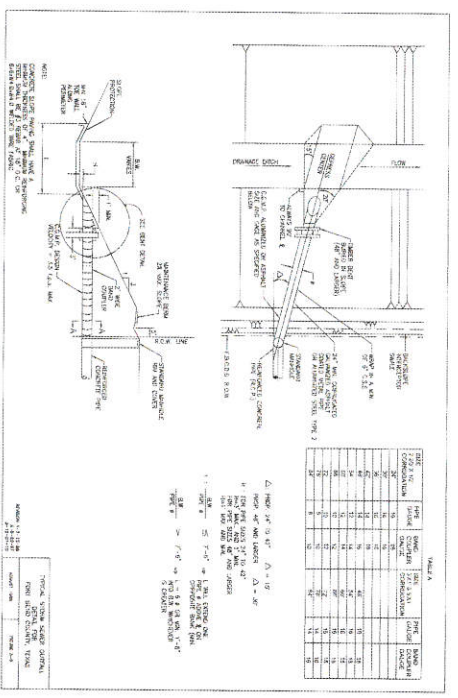
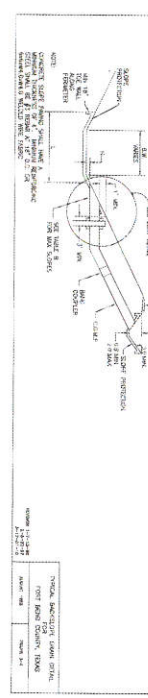
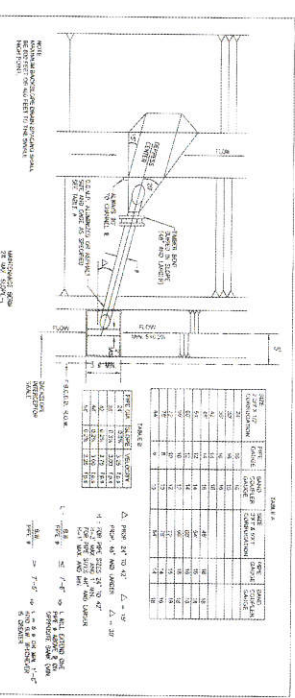


BID SET ONLY  
NOT FOR CONSTRUCTION



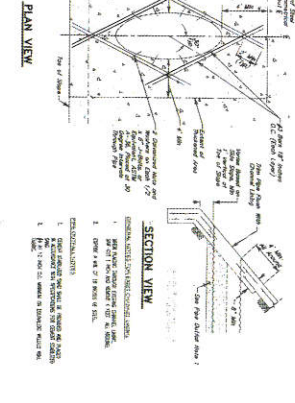
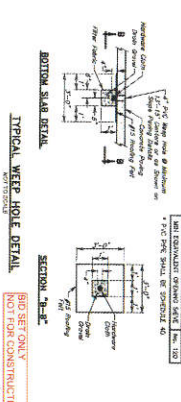
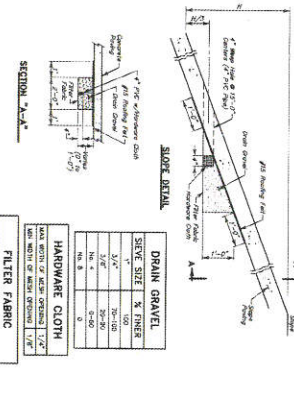
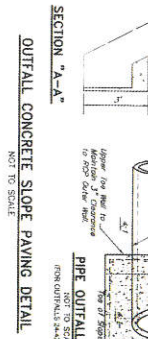
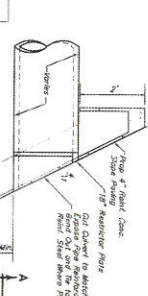
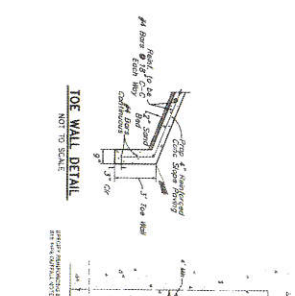
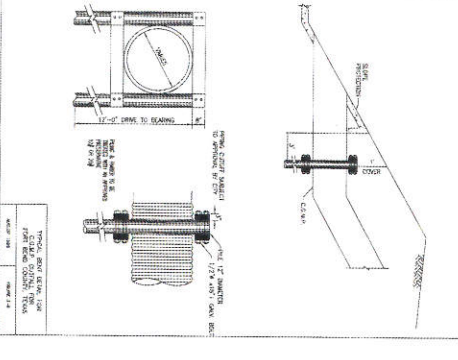






- GENERAL NOTES:**
1. SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARDS OF THE STATE OF TEXAS AND THE FEDERAL BUREAU OF SURVEYING.
  2. ALL DIMENSIONS SHALL BE IN FEET AND INCHES UNLESS OTHERWISE SPECIFIED.
  3. ALL MATERIALS SHALL BE OF THE BEST QUALITY AVAILABLE.
  4. ALL WORK SHALL BE ACCORDING TO THE SPECIFICATIONS AND STANDARDS OF THE STATE OF TEXAS AND THE FEDERAL BUREAU OF SURVEYING.
  5. ALL WORK SHALL BE ACCORDING TO THE SPECIFICATIONS AND STANDARDS OF THE STATE OF TEXAS AND THE FEDERAL BUREAU OF SURVEYING.
  6. ALL WORK SHALL BE ACCORDING TO THE SPECIFICATIONS AND STANDARDS OF THE STATE OF TEXAS AND THE FEDERAL BUREAU OF SURVEYING.
  7. ALL WORK SHALL BE ACCORDING TO THE SPECIFICATIONS AND STANDARDS OF THE STATE OF TEXAS AND THE FEDERAL BUREAU OF SURVEYING.
  8. ALL WORK SHALL BE ACCORDING TO THE SPECIFICATIONS AND STANDARDS OF THE STATE OF TEXAS AND THE FEDERAL BUREAU OF SURVEYING.
  9. ALL WORK SHALL BE ACCORDING TO THE SPECIFICATIONS AND STANDARDS OF THE STATE OF TEXAS AND THE FEDERAL BUREAU OF SURVEYING.
  10. ALL WORK SHALL BE ACCORDING TO THE SPECIFICATIONS AND STANDARDS OF THE STATE OF TEXAS AND THE FEDERAL BUREAU OF SURVEYING.
  11. ALL WORK SHALL BE ACCORDING TO THE SPECIFICATIONS AND STANDARDS OF THE STATE OF TEXAS AND THE FEDERAL BUREAU OF SURVEYING.

THE OWNER 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.



**DRAIN GRAVEL**

SEWE SIZE	R. FINES
1/4"	20-100
1/2"	20-100
3/4"	20-100
1"	20-100
1 1/2"	20-100
2"	20-100

**HARDWARE CLOTH**

NO. WEIGHT OF WIRE PER SQUARE FOOT	WIRE SIZE
10	1/8"
12	3/16"
14	1/4"
16	5/16"
18	3/8"
20	7/16"
22	1/2"
24	5/8"
26	3/4"
28	7/8"
30	1"

**FILTER FABRIC**

NO. WEIGHT OF WIRE PER SQUARE FOOT	WIRE SIZE
10	1/8"
12	3/16"
14	1/4"
16	5/16"
18	3/8"
20	7/16"
22	1/2"
24	5/8"
26	3/4"
28	7/8"
30	1"

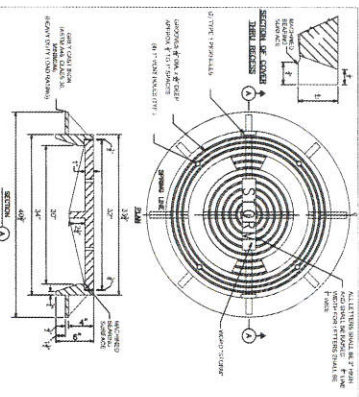
**J.C. JONES & COMPANY**  
 ENGINEERS-PLANNERS-CONSTRUCTORS  
 1800 WEST 10TH STREET, SUITE 100  
 FORT WORTH, TEXAS 76102  
 PHONE: 817-733-1111  
 FAX: 817-733-1112  
 WWW: www.jcjc.com

**THE GEORGE A. & S. PECAN GROVE MUNICIPAL UTILITY DISTRICT**  
 FORT BEND COUNTY, TEXAS  
 DRAINAGE IMPROVEMENTS

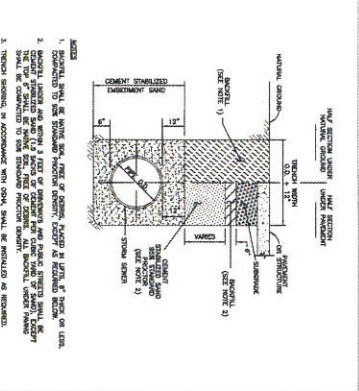
**MISCELLANEOUS DETAILS**

DATE: 10/18/17  
 DRAWN BY: J.C.J.  
 CHECKED BY: J.C.J.  
 SCALE: AS SHOWN

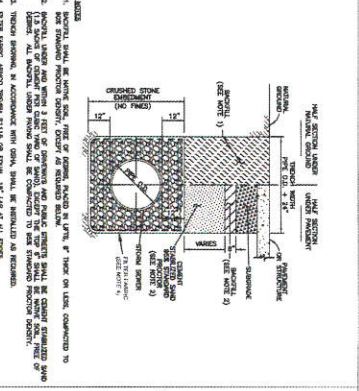
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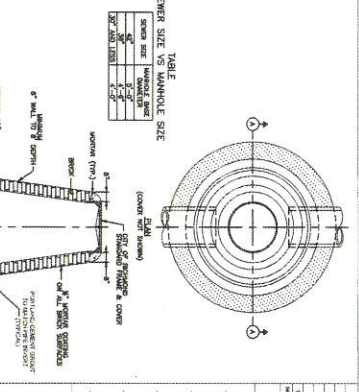
1. MANHOLE AND INLET FRAME 48" CENTER



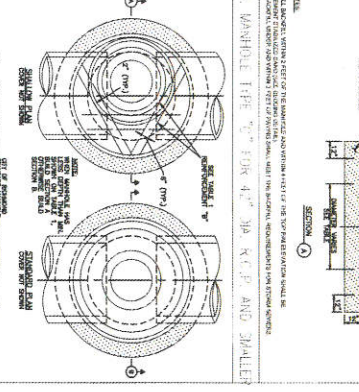
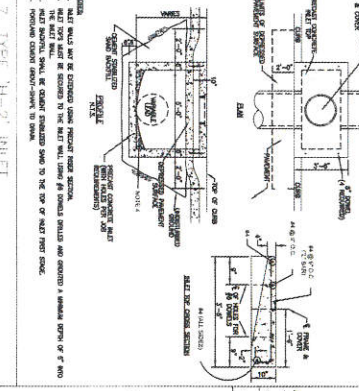
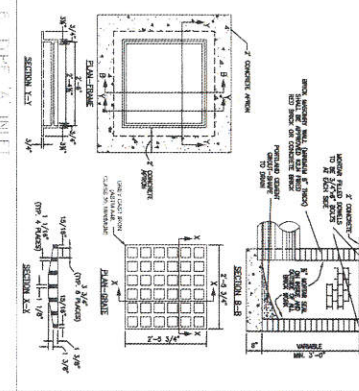
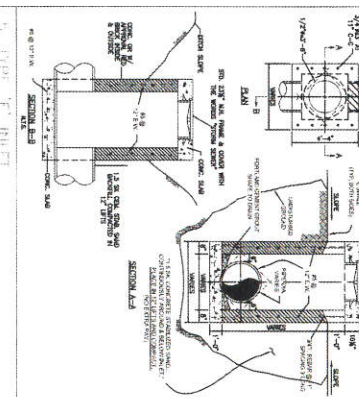
2. 48" DIA. SEWER BEDDING



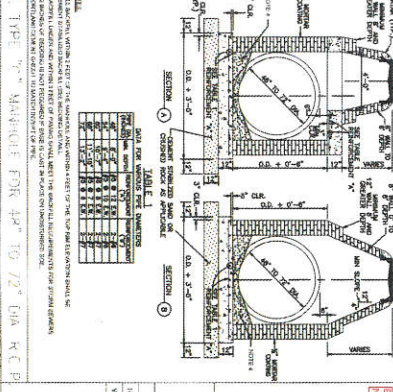
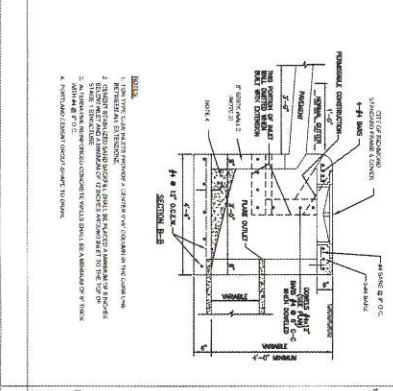
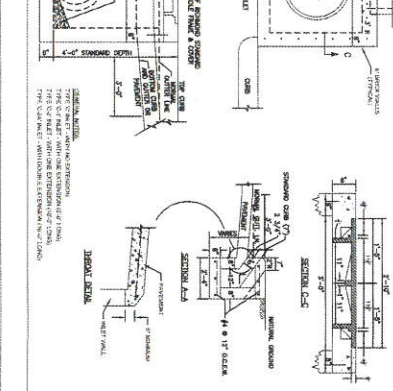
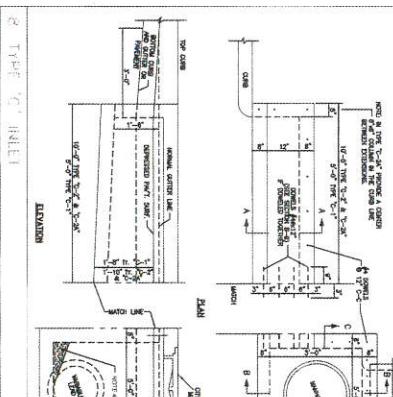
3. 48" DIA. SEWER BEDDING FOR WET CONDITIONS



4. MANHOLE FRAME 48" DIA. MANHOLE AND 72" INLET



5. MANHOLE FRAME 72" DIA. MANHOLE AND 48" INLET



6. MANHOLE FRAME 72" DIA. MANHOLE AND 72" INLET

TABLE  
SEWER SIZE VS MANHOLE SIZE

SEWER SIZE (INCH)	MANHOLE SIZE (INCH)
12	18
15	24
18	30
24	36
30	42
36	48
42	54
48	60
54	66
60	72
66	78
72	84
78	90
84	96
90	102
96	108
102	114
108	120
114	126
120	132
126	138
132	144
138	150
144	156
150	162
156	168
162	174
168	180
174	186
180	192
186	198
192	204
198	210
204	216
210	222
216	228
222	234
228	240
234	246
240	252
246	258
252	264
258	270
264	276
270	282
276	288
282	294
288	300
294	306
300	312
306	318
312	324
318	330
324	336
330	342
336	348
342	354
348	360
354	366
360	372
366	378
372	384
378	390
384	396
390	402
396	408
402	414
408	420
414	426
420	432
426	438
432	444
438	450
444	456
450	462
456	468
462	474
468	480
474	486
480	492
486	498
492	504
498	510
504	516
510	522
516	528
522	534
528	540
534	546
540	552
546	558
552	564
558	570
564	576
570	582
576	588
582	594
588	600
594	606
600	612
606	618
612	624
618	630
624	636
630	642
636	648
642	654
648	660
654	666
660	672
666	678
672	684
678	690
684	696
690	702
696	708
702	714
708	720
714	726
720	732
726	738
732	744
738	750
744	756
750	762
756	768
762	774
768	780
774	786
780	792
786	798
792	804
798	810
804	816
810	822
816	828
822	834
828	840
834	846
840	852
846	858
852	864
858	870
864	876
870	882
876	888
882	894
888	900
894	906
900	912
906	918
912	924
918	930
924	936
930	942
936	948
942	954
948	960
954	966
960	972
966	978
972	984
978	990
984	996
990	1002
996	1008
1002	1014
1008	1020
1014	1026
1020	1032
1026	1038
1032	1044
1038	1050
1044	1056
1050	1062
1056	1068
1062	1074
1068	1080
1074	1086
1080	1092
1086	1098
1092	1104
1098	1110
1104	1116
1110	1122
1116	1128
1122	1134
1128	1140
1134	1146
1140	1152
1146	1158
1152	1164
1158	1170
1164	1176
1170	1182
1176	1188
1182	1194
1188	1200

NOT FOR CONSTRUCTION

DAVID M. DAZZLER  
SEAL

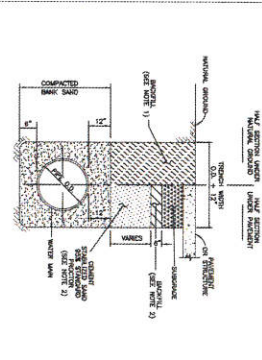
J.C. JONES & CARTE RAY  
CITY OF BEAVERHOND  
STANDARD CONSTRUCTION DETAILS  
SEWER

SCALE  
VERTICAL: 1" = 8'  
HORIZONTAL: 1" = 16'

DATE: OCTOBER 14, 2009

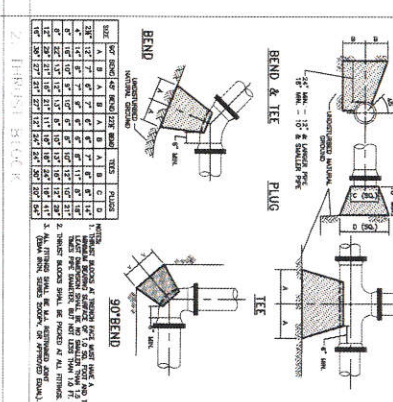
19





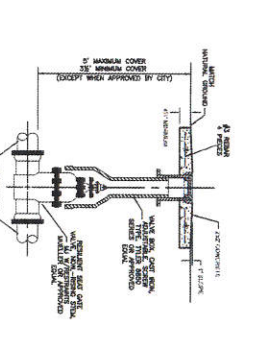
**NOTES:**

1. INSTALL SHALL BE MADE BY THE CITY OF BIRMINGHAM, ALABAMA, IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.
2. THE WATER LIFT MECHANISM SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.



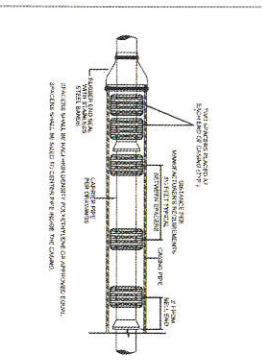
**NOTES:**

1. THE BEND AND TEE SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.
2. THE PLUG SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.
3. THE TEE SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.
4. THE 90° BEND SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.



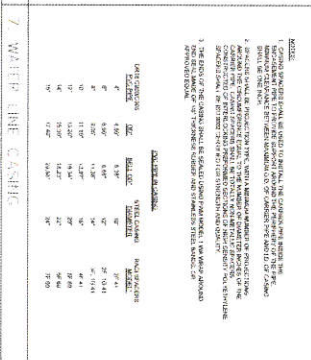
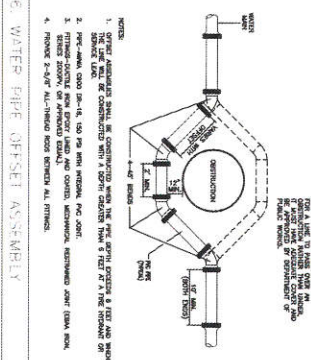
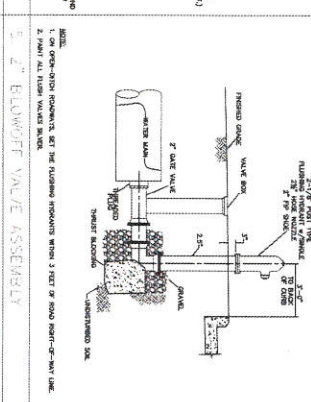
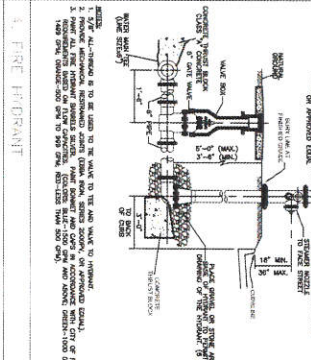
**NOTES:**

1. THE GATE VALVE AND HAND BOX SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.
2. THE GATE VALVE AND HAND BOX SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.



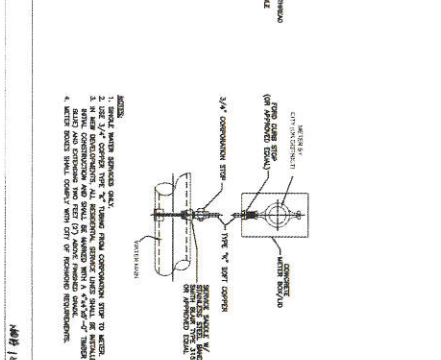
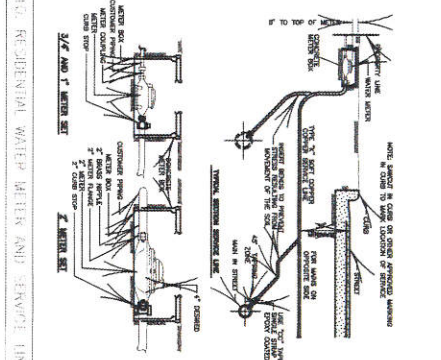
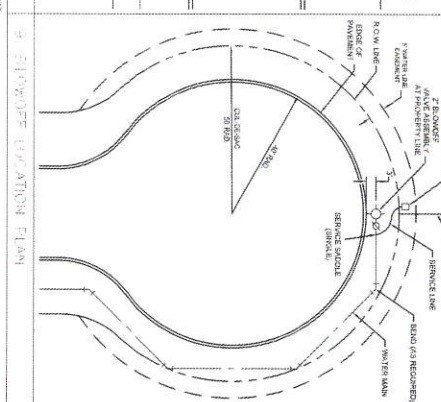
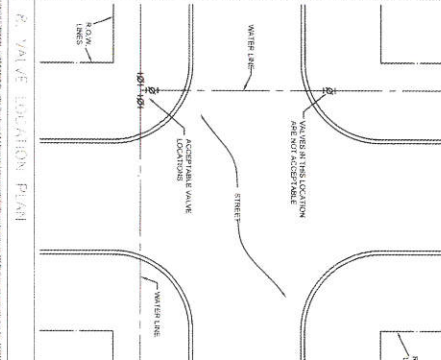
**NOTES:**

1. THE WATER PIPE OFFSET ASSEMBLY SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.
2. THE WATER PIPE OFFSET ASSEMBLY SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.



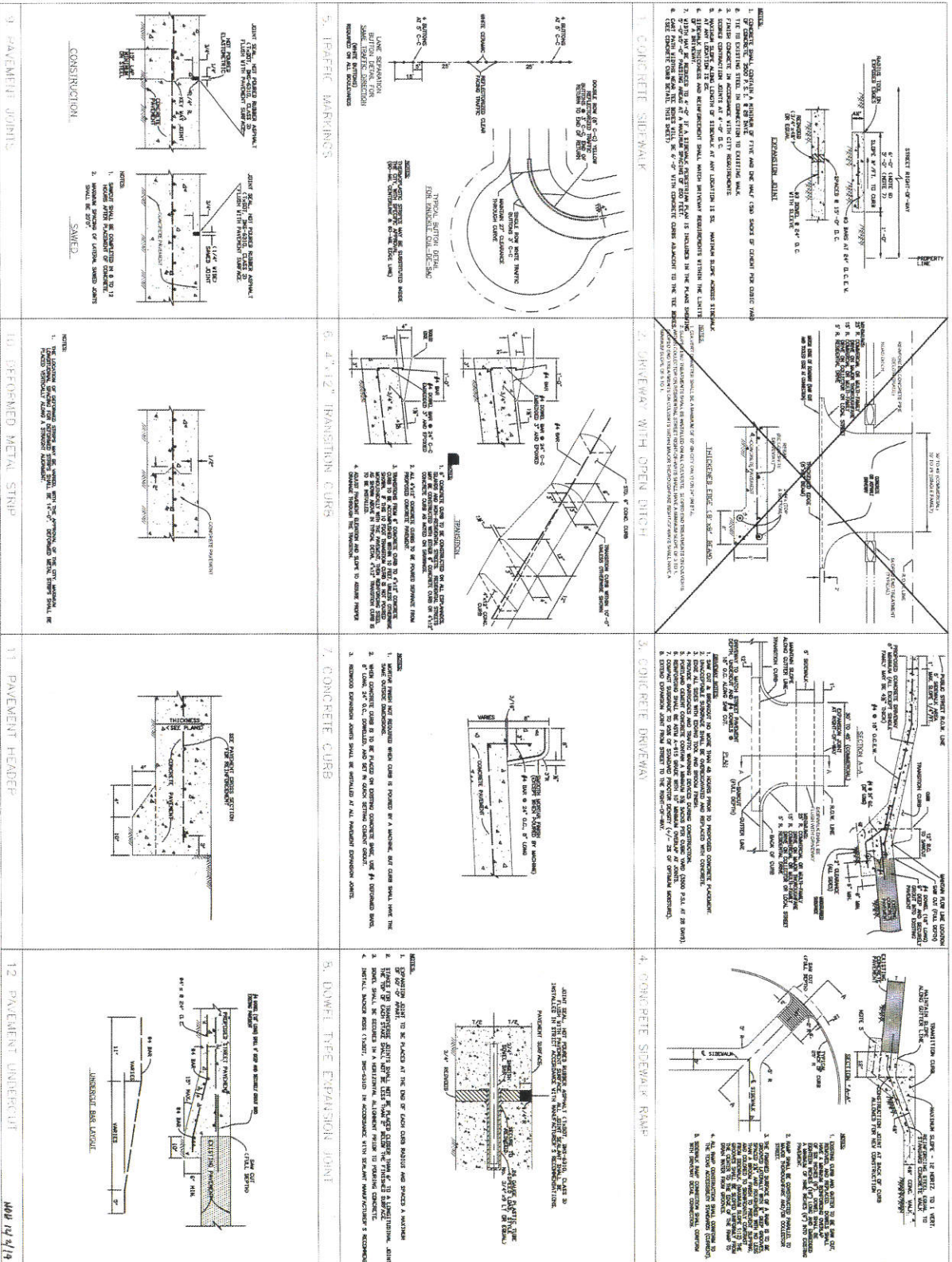
**NOTES:**

1. THE WATER PIPE CASING SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.
2. THE WATER PIPE CASING SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.

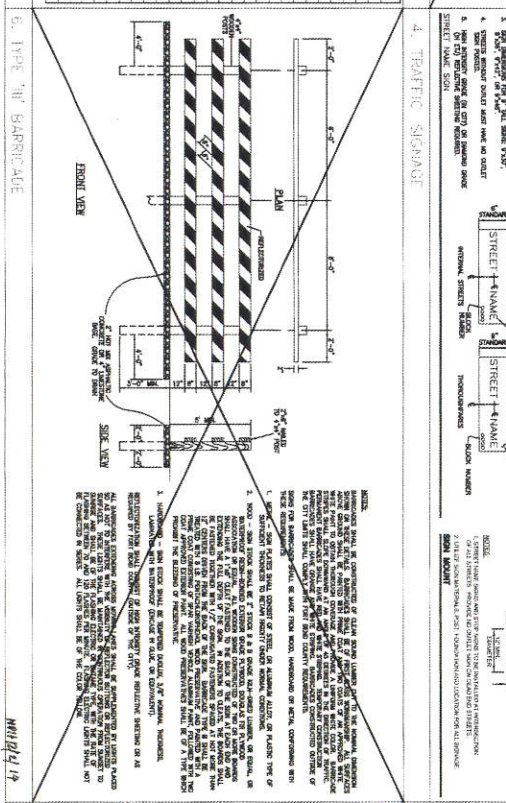
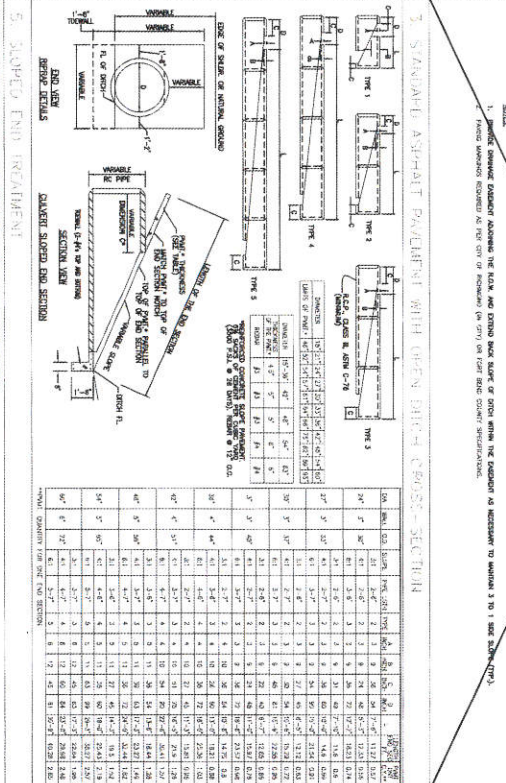
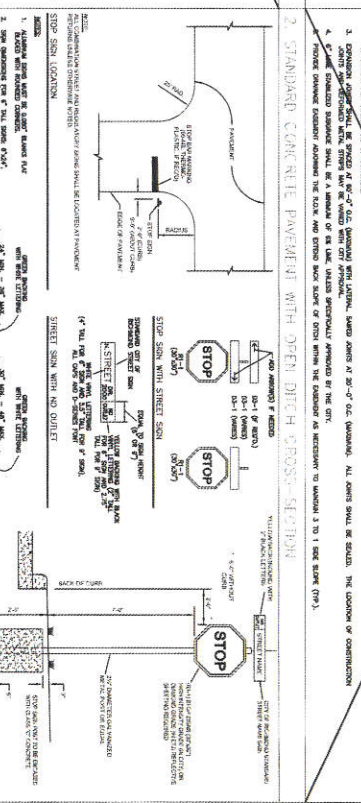
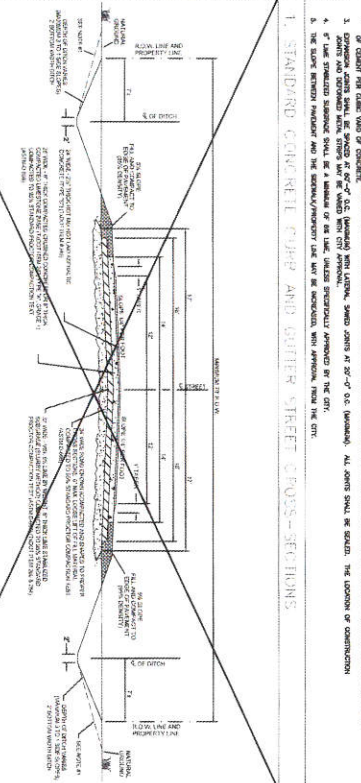
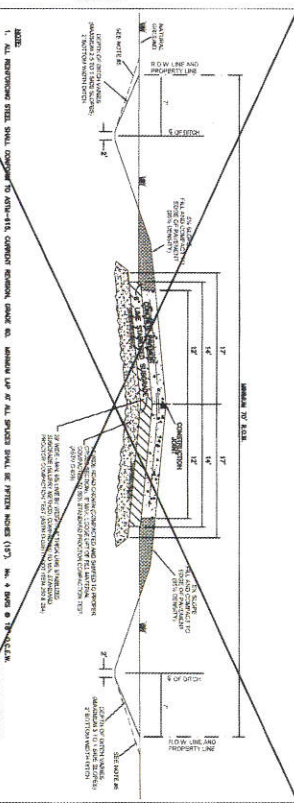
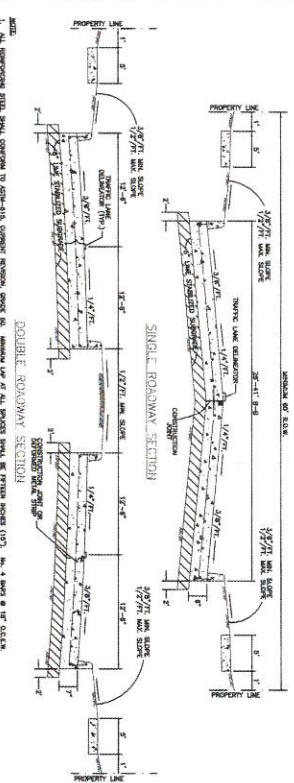


**NOTES:**

1. THE WATER PIPE CASING LOCATION SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.
2. THE WATER PIPE CASING LOCATION SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF BIRMINGHAM WATER DEPARTMENT SPECIFICATIONS FOR WATER LIFT MECHANISMS.



<p>DATE: OCTOBER 24, 2007</p> <p>SCALE: 1" = 4'-0"</p> <p>PROJECT: CITY OF RICHMOND</p> <p>STANDARD CONSTRUCTION DETAILS</p> <p>PAVING 1</p>		<p><b>22</b></p>
<p>APPROVED FOR CONSTRUCTION</p> <p><b>JONES &amp; CARTER R.L.A.</b></p> <p>REGISTERED PROFESSIONAL ENGINEERS</p> <p>10000 W. BROADWAY, SUITE 1000</p> <p>IRVING, TEXAS 75039</p> <p>DATE: OCTOBER 24, 2007</p>		



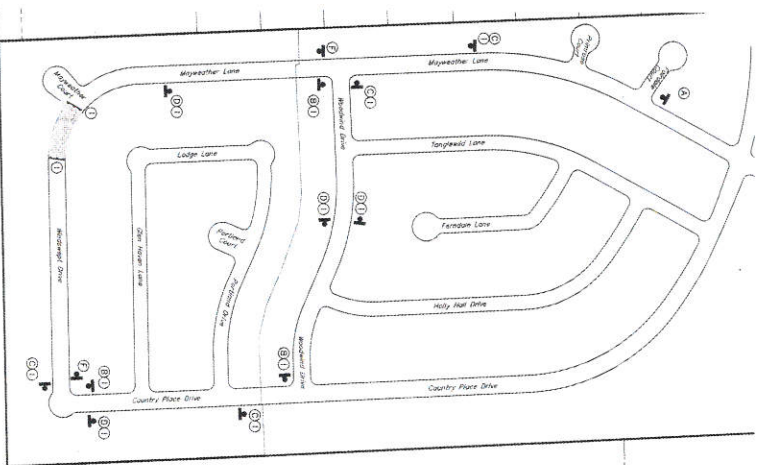
**CITY OF INDIANAPOLIS**  
**ENGINEERS-PLANNERS-SURVEYORS**  
**STANDARD CONSTRUCTION DETAILS**  
**PLANNING II**

**SCALE:** (1) 1" = 10'-0"  
 (2) 1" = 20'-0"  
 (3) 1" = 40'-0"  
 (4) 1" = 80'-0"  
 (5) 1" = 160'-0"

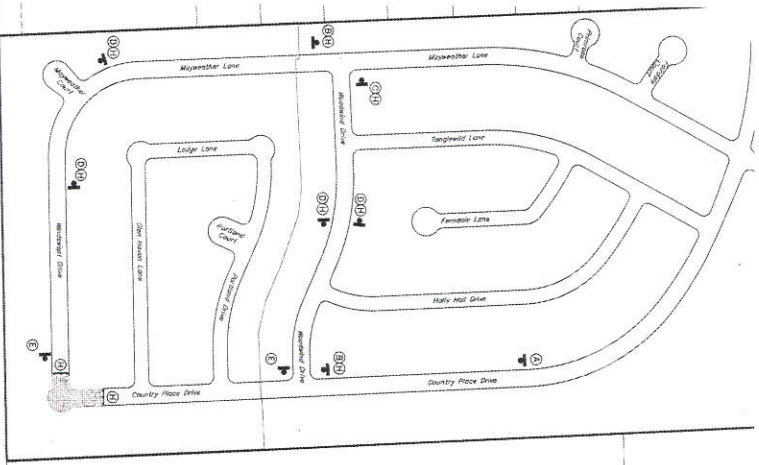
**DATE:** 08/11/11  
**DESIGNED BY:** [Name]  
**CHECKED BY:** [Name]  
**DATE:** 08/11/11

**PROJECT:** [Project Name]

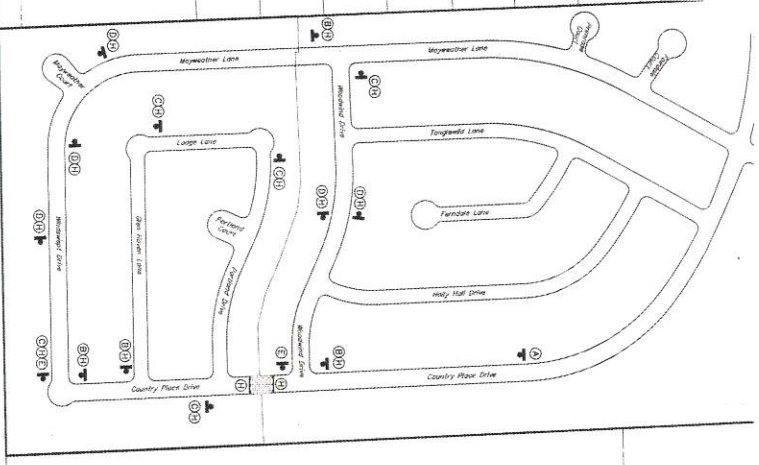
**23**



Traffic Control for Closure of  
Mayweather Lane



Traffic Control for Closure of  
Mayweather Lane & Country Place Drive



Traffic Control for Closure of  
Country Place Drive

**TRAFFIC CONTROL CONSTRUCTION SEQUENCE**

1	2	3
4	5	6
7	8	9
10	11	12

**TRAFFIC CONTROL LEGEND**

1. Traffic Sign (Standard 1 Sign)  
2. Traffic Sign (Standard 2 Sign)  
3. Construction Sign  
4. End of Roadwork  
5. End of Roadwork  
6. End of Roadwork  
7. End of Roadwork  
8. End of Roadwork  
9. End of Roadwork  
10. End of Roadwork  
11. End of Roadwork  
12. End of Roadwork

**PHASE WORK ZONE AREA**



APPROVED: \_\_\_\_\_  
DATE: 12/19

PRIVATE UTILITY LINES SHOWN  
ARE NOT TO SCALE AND ARE FOR INFORMATION ONLY.  
THEY DO NOT REPRESENT THE LOCATION OF ANY UTILITIES.  
THEY ARE SHOWN FOR INFORMATION ONLY.

PECAN GROVE MUNICIPAL UTILITY DISTRICT  
7501 GARDEN GROVE, TEXAS 75043

THE GROVE 4 & 5  
DRAINAGE IMPROVEMENTS  
TRAFFIC CONTROL PLAN

DATE: 12/19/19  
DRAWN BY: JLS  
CHECKED BY: JLS  
APPROVED BY: JLS



THIS SET ONLY  
NOT FOR CONSTRUCTION