

**Approved**

**REQUEST FOR AGENDA PLACEMENT FORM**

Submission Deadline - Tuesday, 12:00 PM before Court Dates

**SUBMITTED BY: Commissioner Larry Woolley**  
**TODAY'S DATE: 12/03/19**

**DEPARTMENT: Precinct 4**

**SIGNATURE OF DEPARTMENT HEAD:**

**REQUESTED AGENDA DATE: 12/09/19**

**SPECIFIC AGENDA WORDING: Consideration of Halff Engineering Flood Study Review No. 1, 2, and 3 and approval of road cut to be made in accord with such study to accommodate box culverts and drainage under County Road 805 from Villages of Mayfield Phase I in City of Cleburne in Johnson County, Texas.**

**PERSON(S) TO PRESENT ITEM: Commissioner Larry Woolley**

**SUPPORT MATERIAL: (Must enclose supporting documentation)**

**TIME: 10 min**

**ACTION ITEM:   X**

**WORKSHOP**

(Anticipated number of minutes needed to discuss item) **CONSENT:**

**EXECUTIVE:**

**STAFF NOTICE:**

**COUNTY ATTORNEY:   X**

**IT DEPARTMENT:**

**AUDITOR:**

**PURCHASING DEPARTMENT:**

**PERSONNEL:**

**PUBLIC WORKS:   X**

**BUDGET COORDINATOR:**

**OTHER:**

**\*\*\*\*\*This Section to be Completed by County Judge's Office\*\*\*\*\***

ASSIGNED AGENDA DATE:           

REQUEST RECEIVED BY COUNTY JUDGE'S OFFICE           

COURT MEMBER APPROVAL            Date



August 2, 2019  
AVO 32083

Larry Woolley, Commissioner  
Johnson County, Precinct 4  
4300 E. FM 4  
Cleburne, TX 76031

**Re: Villages of Mayfield Phase 1 – Flood Study Review #1**

Dear Mr. Woolley:

The site plans for the referenced project were received by Halff Associates, Inc. on July 16, 2019. Our comments are as follows and are accompanied by attached plan markups. Notice to proceed with the review was received on July 22, 2019.

1. Please ensure that the applicable notes and restrictions on drainage easements are included on the plat and/or accompanying sheets as outlined in the Subdivision Rules and Regulations of Johnson County (hereafter referred to as SRRJCO), Section IV.C. Notably missing are the following items:
  - a. City limit lines (Cleburne)
  - b. Flood notes as outlined in Section IV.C.6
  - c. Duties of Developer/Property Owner
2. Rational method calculation tables with column name "Roughness Coefficient" were assumed to be equivalent to the runoff coefficient.
3. Area OS-2 delineation on Sheet C-4.1 misses an area of approximately 24 acres which appears to drain to the proposed development, based on City of Cleburne terrain data. Please confirm the source of topography used for delineation and revise or explain the reason for the delineation at this location. See attached markup.
4. "Pre-Area 1" is shown with a runoff coefficient of 0.38, but appears it should be 0.3. Please explain if there is existing impervious area or if a different source for impervious runoff coefficient was used.
5. Per the SRRJCO, Section D, "All storm-water drainage improvements shall be designed based upon the entire contributing drainage area being fully developed". Please show that the ditch and proposed driveway culverts on CR 805 are designed to handle the fully developed 5-year flow. Since area OS-2 drains to the ditch, it needs to have a runoff coefficient which assumes currently undeveloped areas as being developed. See SRRJCO, Appendix A, Section D for detailed requirements.
6. Please clearly show cross sections of the CR 805 ditch used for hydraulic calculations and clarify what drainage area, runoff coefficients, storm frequency, etc. were used for each calculation. The flow shown on Sheet C-4.6 is much greater (106.4 cfs) than the ditch capacity shown on Sheet C-4.1 (68.2 cfs). Please add a cross section with hydraulic calculations at a location downstream of the site to compare existing and proposed conditions. Depth of flow should be shown. Please note that the minimum capacity of ditches and driveway culvert improvements should be based on the 5-year storm frequency per SRRJCO, Appendix A, Section D.2.

HALFF ASSOCIATES, INC.

4000 FOSSIL CREEK BOULEVARD  
FORT WORTH, TX 76137-2720

TEL: (817) 647-1422  
FAX: (817) 252-9784

WWW.HALFF.COM



7. We recommend providing a backwater analysis of the proposed off-site drainage channel, although not required by the SRRJCO. The channel design must be adequate to convey the 100-year frequency storm plus 1 foot of freeboard.
8. The proposed off-site drainage channel easement needs to provide a 15' buffer on each side for maintenance access per SRRJCO, Appendix A, Section E.4.
9. Please show the channel velocity at its outfall to East Buffalo Creek. Recommend providing riprap sizing calculations to confirm adequate erosion protection is provided.
10. Sheet C-4.3 hydraulic calculations for the 4x8 culvert crossing at CR 805 show a length of 16 feet, but the profile shows a length of 32 ft. Please clarify correct culvert length.
11. Sheet C-4.3 shows the channel driveway culvert crossing as 3x8, but the plan sheet C-4.7 shows 4x8. Please reconcile.
12. Sheet C-7.1 erosion control plan does not show the off-site drainage channel to its outfall into East Buffalo Creek. Please include an erosion control plan for the entire channel, ensuring compliance with SRRJCO, Appendix A, Section E.8
13. Since this development is greater than 5 acres, it falls under the "large construction site" category as defined by TCEQ and will need to comply with the Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit Number TXR150000.

**Please provide a written response to the above comments with the next submittal. Items revised in response to these comments may generate additional comments.**

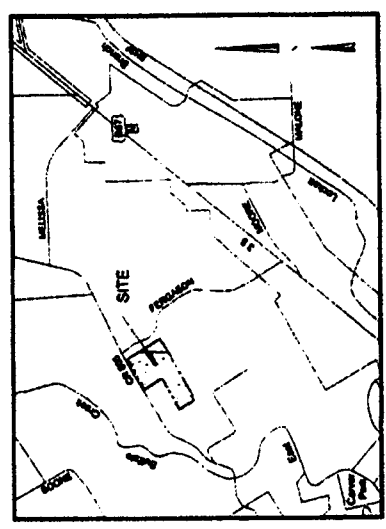
If you have any questions or need additional information, please do not hesitate to call me at (817) 764-7481, or Ben Pylant at (817) 764-7488.

Sincerely,  
**HALFF ASSOCIATES, INC.**  
TBPE Firm No. 312

A handwritten signature in black ink, appearing to read "Randy Dueck", is written over a light blue horizontal line.

Randy Dueck, P.E., CFM

# CIVIL CONSTRUCTION PLANS FOR VILLAGES OF MAYFIELD - PHASE I



IN  
**CLEBURNE, TEXAS  
JOHNSON COUNTY**

**PERMIT SET  
JULY 2019**

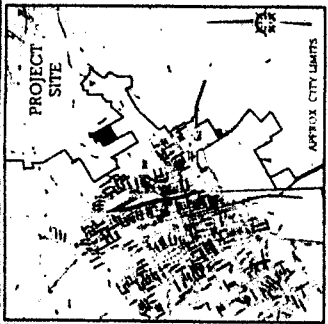


Sheet Number	Sheet Title	Sheet Size
1	GENERAL NOTES	11x17
2	PROPOSED DRIVE AND SIDEWALK	11x17
3	PROPOSED DRIVE AND SIDEWALK	11x17
4	PROPOSED DRIVE AND SIDEWALK	11x17
5	PROPOSED DRIVE AND SIDEWALK	11x17
6	PROPOSED DRIVE AND SIDEWALK	11x17
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100	PROPOSED DRIVE AND SIDEWALK	11x17

ENGINEER/DATE FOR  
 TOPOGRAPHIC AND SURVEYORS  
 1801 LIVINGSTON PARKWAY, STE 148  
 FORT WORTH, TEXAS 76104  
 PHONE 817.744.1312

CHAIR R  
 MFP AND ASSOCIATES, INC.  
 1317 GELMAN RD  
 FORT WORTH, TEXAS 76104  
 817.744.1312

PREPARED BY  
**TOPOGRAPHIC**  
 LOYALTY INNOVATION LEGACY  
 1801 LIVINGSTON PARKWAY, STE 148 FORT WORTH, TEXAS 76104  
 TEL: 817.744.1312 FAX: 817.744.1313  
 WWW.TOPOGPHIC.COM



VICINITY MAP

OWNER: AL MCNITT FAMILY PARTNERSHIP, LTD.

ENGINEER/SURVEYOR: TOPOGRAPHIC

DATE: 01/04/2019

PROJECT: THE VILLAGES AT MAYFIELD PHASE 1

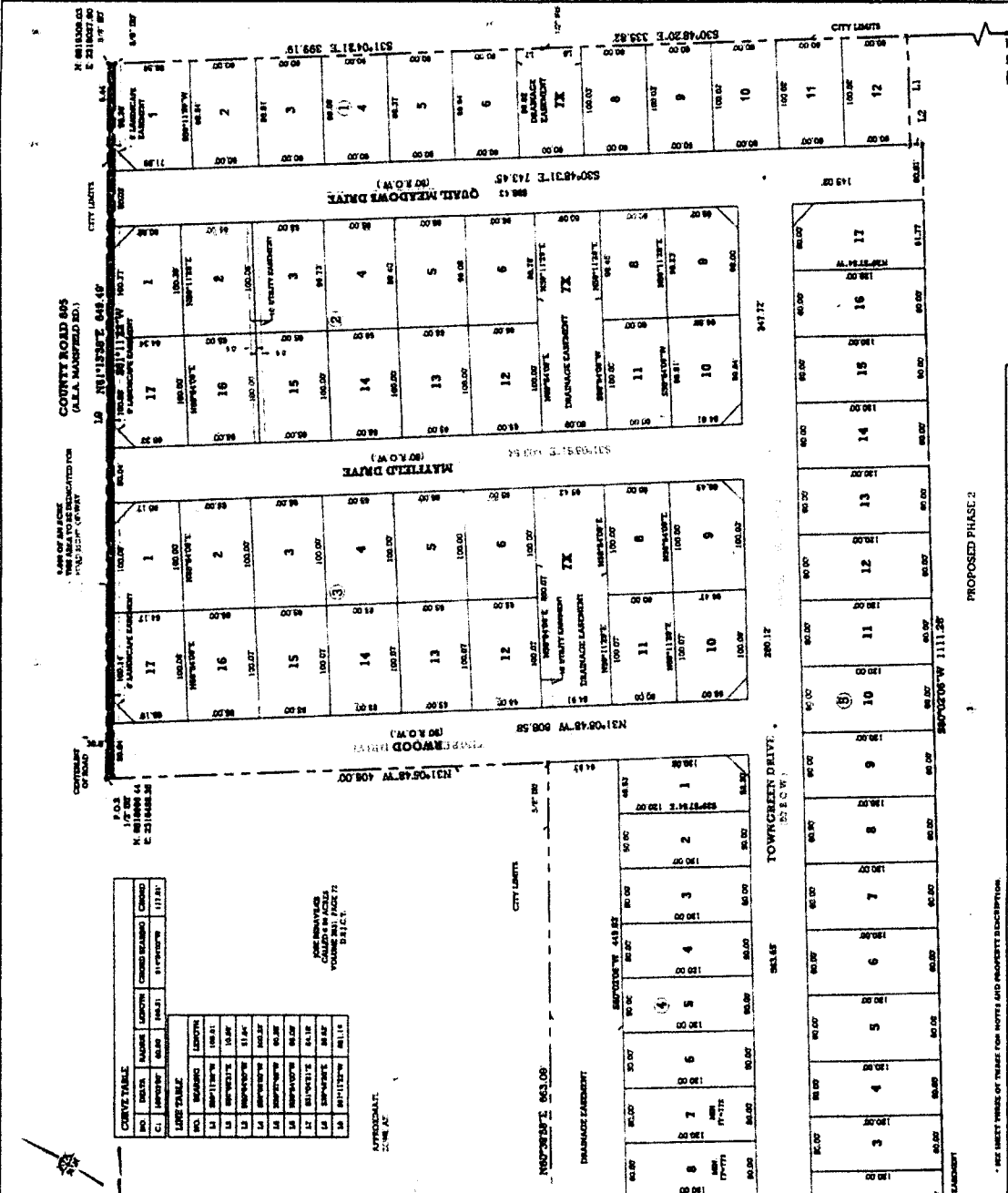
LOT 1-4, 7X 6.17, BLOCK 1, LOTS 1, 4, 7X 6.17

BEING PART OF THE C. CHAMBERLAIN SURVEY, ABSTRACT NO. 124, CITY OF CLEMENS, JOHNSON COUNTY, TEXAS

FILE # P NHQ VILLAGES AT MAYFIELD 06122019

DRAWN FOR: CHUCK SED

SHEET 1 OF 3 DATE: 01/04/2019



CURVE TABLE

NO.	BEARING	CHORD BEARING	CHORD	ARC LENGTH	AREA
1	S 10° 00' 00" E	S 10° 00' 00" E	100.00	31.416	1570.80
2	S 80° 00' 00" E	S 80° 00' 00" E	100.00	31.416	1570.80
3	S 10° 00' 00" W	S 10° 00' 00" W	100.00	31.416	1570.80
4	S 80° 00' 00" W	S 80° 00' 00" W	100.00	31.416	1570.80
5	S 10° 00' 00" E	S 10° 00' 00" E	100.00	31.416	1570.80
6	S 80° 00' 00" E	S 80° 00' 00" E	100.00	31.416	1570.80
7	S 10° 00' 00" W	S 10° 00' 00" W	100.00	31.416	1570.80
8	S 80° 00' 00" W	S 80° 00' 00" W	100.00	31.416	1570.80
9	S 10° 00' 00" E	S 10° 00' 00" E	100.00	31.416	1570.80
10	S 80° 00' 00" E	S 80° 00' 00" E	100.00	31.416	1570.80
11	S 10° 00' 00" W	S 10° 00' 00" W	100.00	31.416	1570.80
12	S 80° 00' 00" W	S 80° 00' 00" W	100.00	31.416	1570.80
13	S 10° 00' 00" E	S 10° 00' 00" E	100.00	31.416	1570.80
14	S 80° 00' 00" E	S 80° 00' 00" E	100.00	31.416	1570.80
15	S 10° 00' 00" W	S 10° 00' 00" W	100.00	31.416	1570.80
16	S 80° 00' 00" W	S 80° 00' 00" W	100.00	31.416	1570.80
17	S 10° 00' 00" E	S 10° 00' 00" E	100.00	31.416	1570.80
18	S 80° 00' 00" E	S 80° 00' 00" E	100.00	31.416	1570.80
19	S 10° 00' 00" W	S 10° 00' 00" W	100.00	31.416	1570.80
20	S 80° 00' 00" W	S 80° 00' 00" W	100.00	31.416	1570.80

OWNER: AL MCNITT FAMILY PARTNERSHIP, LTD.  
 ENGINEER/SURVEYOR: TOPOGRAPHIC

THE VILLAGES AT MAYFIELD  
 PHASE 1

AL MCNITT FAMILY PARTNERSHIP, LTD.  
 4401 N. MC 23 ST. 107  
 DENTON, TEXAS 76207  
 (817) 341-1949

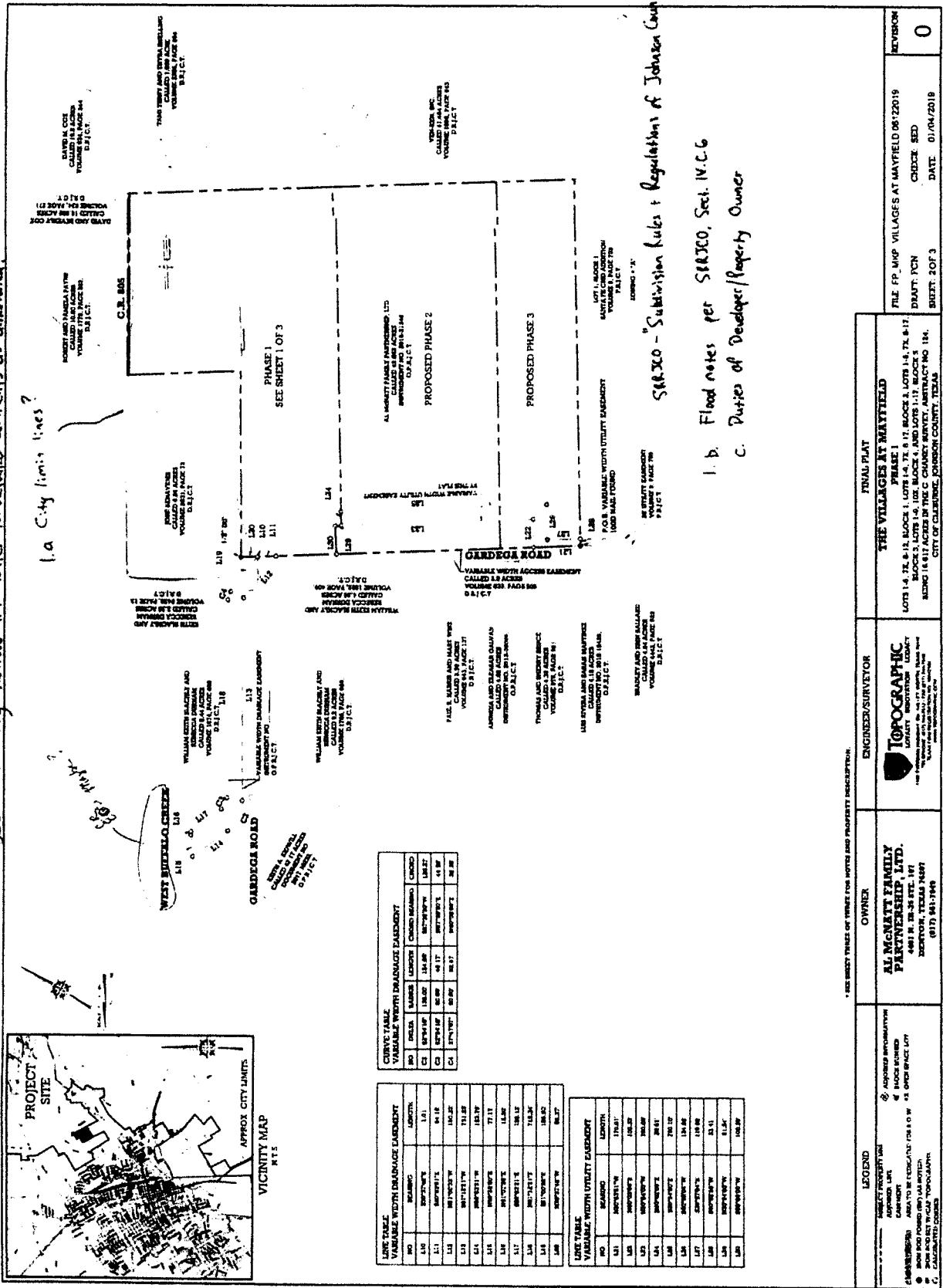
TOPOGRAPHIC  
 4401 N. MC 23 ST. 107  
 DENTON, TEXAS 76207  
 (817) 341-1949

PROPOSED PHASE 2

FILE # P NHQ VILLAGES AT MAYFIELD 06122019  
 DRAWN FOR: CHUCK SED  
 SHEET 1 OF 3 DATE: 01/04/2019

See Flood Study Review #1 letter for detailed comments as annotated.

1. a. City limits lines?



SRR300 - Subdivision Rules & Regulations of Johnson County  
 1. b. Flood notes per SRR300, Sect. IV.C.6  
 c. Duties of Developer/Property Owner

CONVERT TABLE  
 VARIABLE WIDTH PARALLEL EASEMENT

NO.	OWNER	WIDTH	LENGTH	COMED NUMBER	COMED
C1	877414P	18.00'	134.00'	877414P	134.27'
C2	877414P	80.00'	48.37'	877414P	48.38'
C3	877414P	80.00'	88.37'	877414P	88.38'

LINE TABLE  
 VARIABLE WIDTH UTILITY EASEMENT

NO.	OWNER	LENGTH
L1	877414P	134.27'
L2	877414P	48.38'
L3	877414P	88.38'
L4	877414P	28.41'
L5	877414P	28.41'
L6	877414P	134.27'
L7	877414P	134.27'
L8	877414P	48.38'
L9	877414P	88.38'
L10	877414P	88.38'

LINE TABLE  
 VARIABLE WIDTH UTILITY EASEMENT

NO.	OWNER	LENGTH
L11	877414P	134.27'
L12	877414P	48.38'
L13	877414P	88.38'
L14	877414P	28.41'
L15	877414P	28.41'
L16	877414P	134.27'
L17	877414P	134.27'
L18	877414P	48.38'
L19	877414P	88.38'
L20	877414P	88.38'

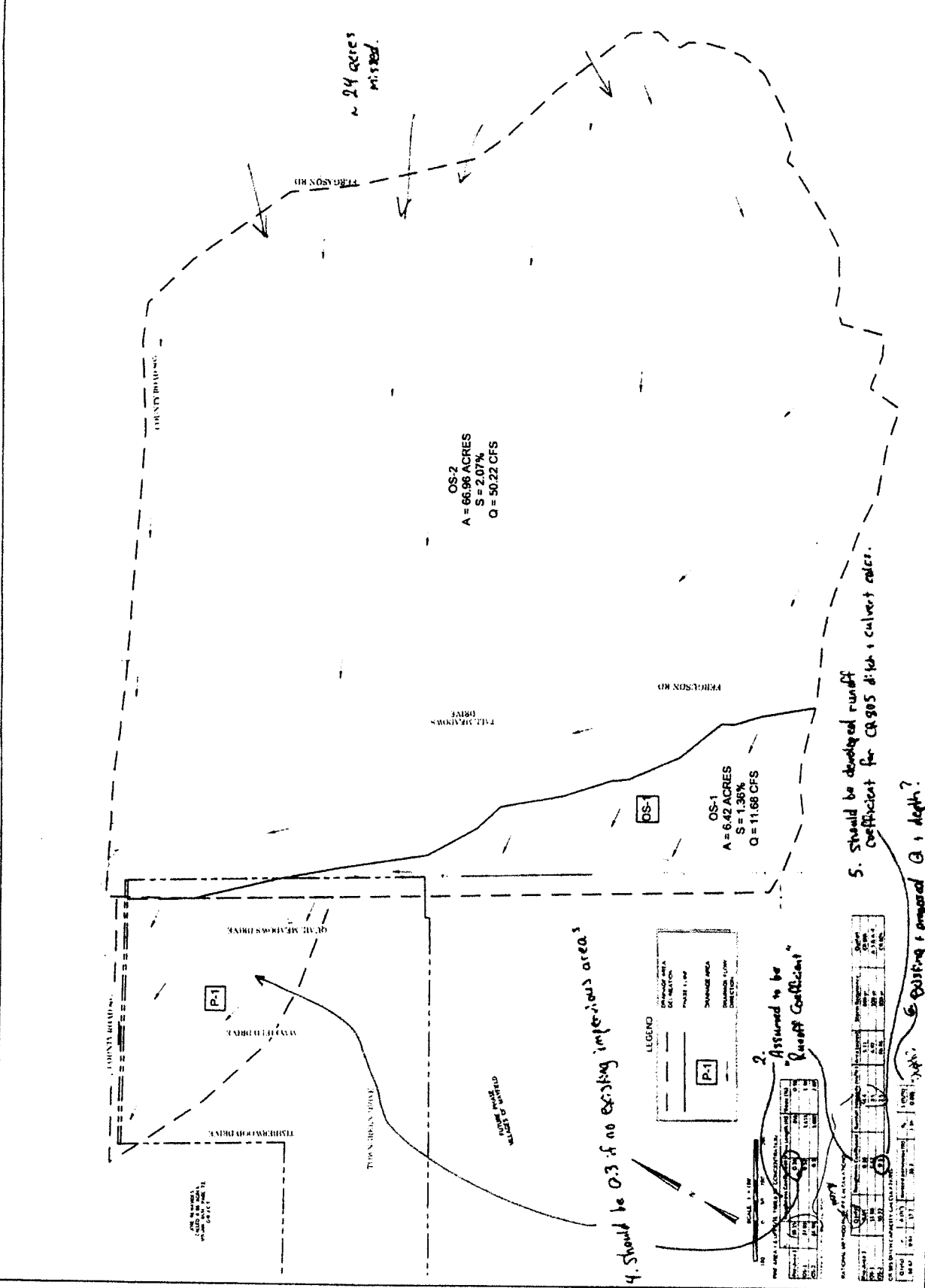
FINAL PLAN  
 THE VILLAGES AT MATFIELD  
 LOTS 1-4, 7-8, 9-12, BLOCK 1, LOTS 1-4, 7-8, 9-12, BLOCK 2, LOTS 1-4, 7-8, 9-12, BLOCK 3, LOTS 1-4, 7-8, 9-12, BLOCK 4, AND LOTS 1-13, BLOCK 5, BEING 14.817 ACRES IN THE C. CHANEY SURVEY, ABSTRACT NO. 184, CITY OF CALDWELL, JOHNSON COUNTY, TEXAS

ENGINEER/SURVEYOR  
 TOPOGRAPHIC  
 4801 N. 28-34 ST., 1ST  
 MCKINNEY, TEXAS 75067  
 (972) 961-1948

OWNER  
 AL MCGNATT FAMILY  
 PARTNERSHIP, LTD.  
 4801 N. 28-34 ST., 1ST  
 MCKINNEY, TEXAS 75067  
 (972) 961-1948

FILE NO. MAP VILLAGES AT MATFIELD 06/22019  
 CHECKED BY: SED  
 DATE: 01/04/2018  
 SHEET: 2 OF 3  
 REVISION: 0





OS-2  
 A = 66.96 ACRES  
 S = 2.07%  
 Q = 50.22 CFS

OS-1  
 A = 6.42 ACRES  
 S = 1.36%  
 Q = 11.68 CFS

OS-3

LEGEND

 PROPOSED AREA OF RETENTION	 PHASE 1 RUNOFF
 CHANGE AREA	 PROPOSED STORM DIRECTION

2. Assumed to be "P-1 Runoff Coefficient"

4. Should be 0.3 if no existing impervious areas

5. Should be developed runoff coefficient for CR90S at this culvert entry.

Existing proposed Q & depth?

NO.	DATE	REVISION DESCRIPTION

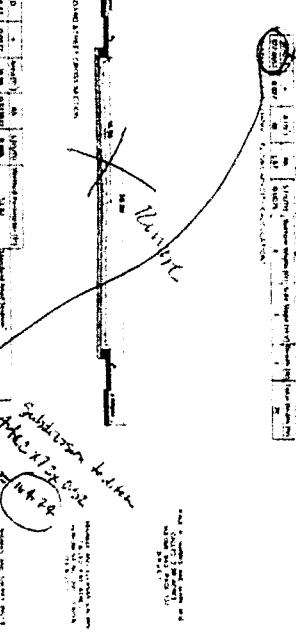
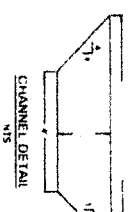
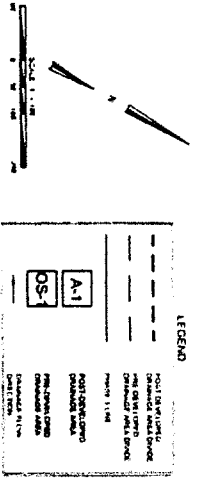
NO.	DATE	REVISION DESCRIPTION



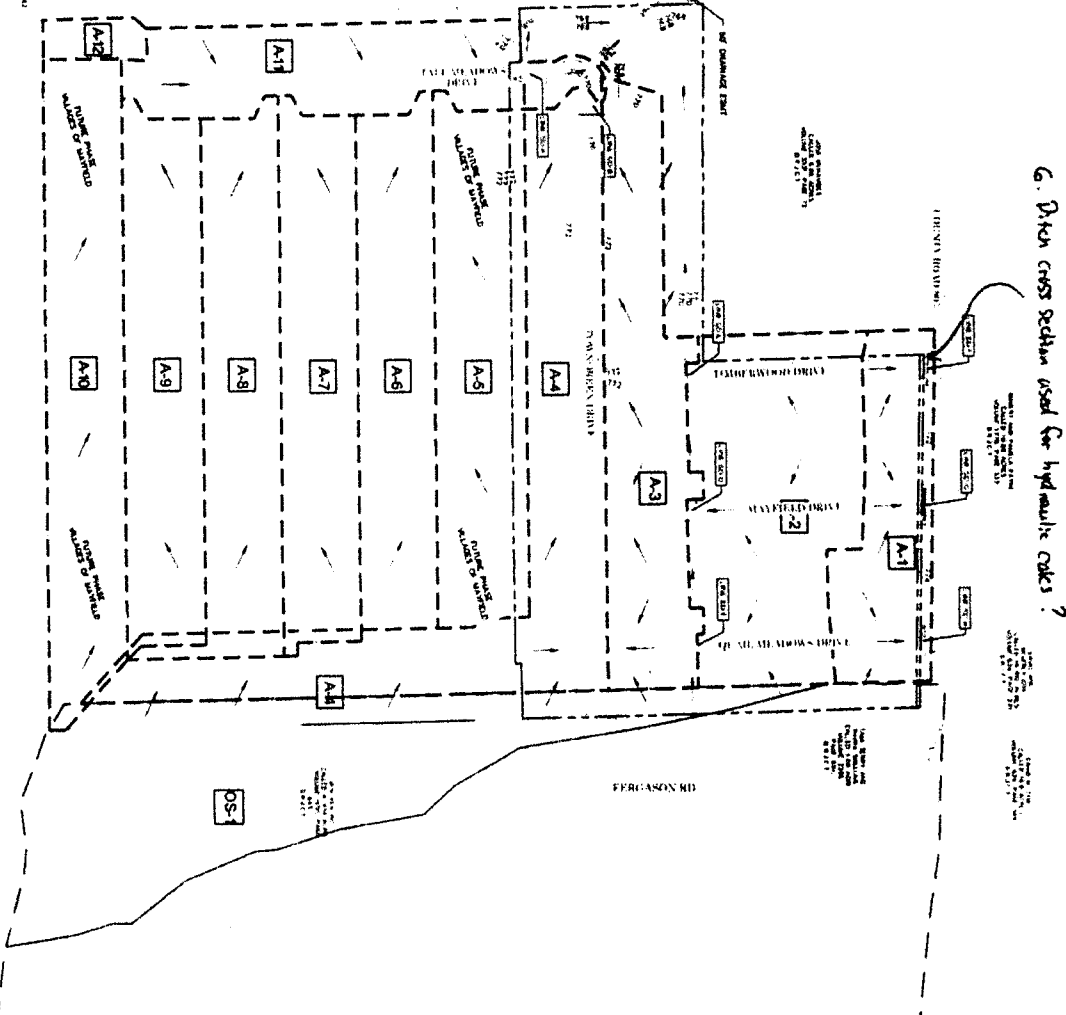
OS-2  
A = 68.86 ACRES  
S = 2.07%  
Q = 50.22 CFS

2011 1010





Stationing	Elev	Slope	Area	Perimeter	Volume
1+00	98.50	1:1	1.5	3.0	4.5
2+00	98.50	1:1	1.5	3.0	4.5
3+00	98.50	1:1	1.5	3.0	4.5
4+00	98.50	1:1	1.5	3.0	4.5
5+00	98.50	1:1	1.5	3.0	4.5
6+00	98.50	1:1	1.5	3.0	4.5
7+00	98.50	1:1	1.5	3.0	4.5
8+00	98.50	1:1	1.5	3.0	4.5
9+00	98.50	1:1	1.5	3.0	4.5
10+00	98.50	1:1	1.5	3.0	4.5



6. Given cross section used for hydraulic coker?

JUSTIN L. TAYLOR  
Professional Engineer  
State of Texas  
No. 12588

NO.	DATE	REVISION DESCRIPTION

### VILLAGES OF MAYFIELD - PHASE I CLEBURNE, TEXAS

## DRAINAGE AREA MAP

**TOPOGRAPHIC**  
LOYALTY INNOVATION LEGACY

1402 EVERMAN PARKWAY SW 106-11 NORTH TEXAS 76140  
TEL: PHONE (817) 246-7512 • FAX (817) 246-7548  
TEXAS FIRM REGISTRATION NO. 18499  
WWW.TOPOGRAPHIC.COM

11. Show as 4x8 on C-47?

2.88' Culvert Span

Span	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Span	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Flow	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5

2.88' No. Culvert Span

Span	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Span	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Flow	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5

10. Should be 32 ft?

1.8' No. Culvert Span

Span	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Span	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Flow	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5

1.8' Culvert Span

Span	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Span	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Flow	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5

1.8' Culvert Span

Span	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Span	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Flow	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5

G. Data for CR 805 driveway culverts? Clarify if 5-yr flows used for culverts.



SHEET NO  
C-4.4

TOPOGRAPHIC  
LOYALTY INNOVATION LEGACY  
1400 EVERHART PARKWAY, SUITE 1400, FT. WORTH, TEXAS 76114  
TELEPHONE: (817) 746-8383 • FAX: (817) 746-8382  
WWW.TOPOGRAPHIC.COM

VILLAGES OF MAYFIELD - PHASE I  
CLEBURNE, TEXAS  
STORM TRENCH DRAIN LINES A & B

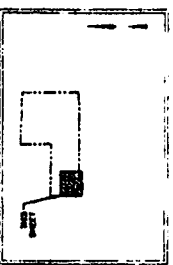
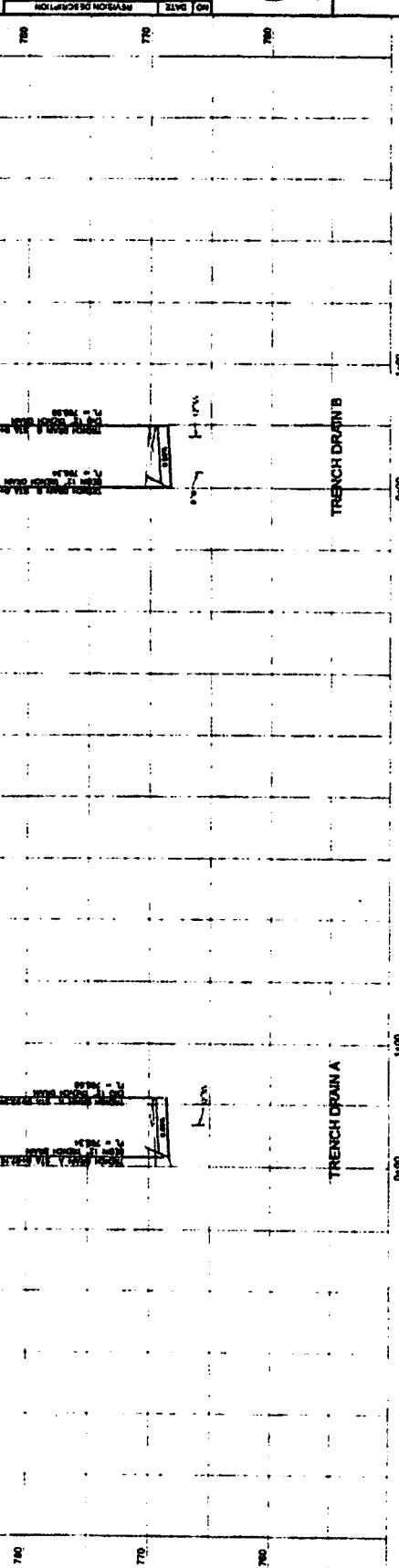
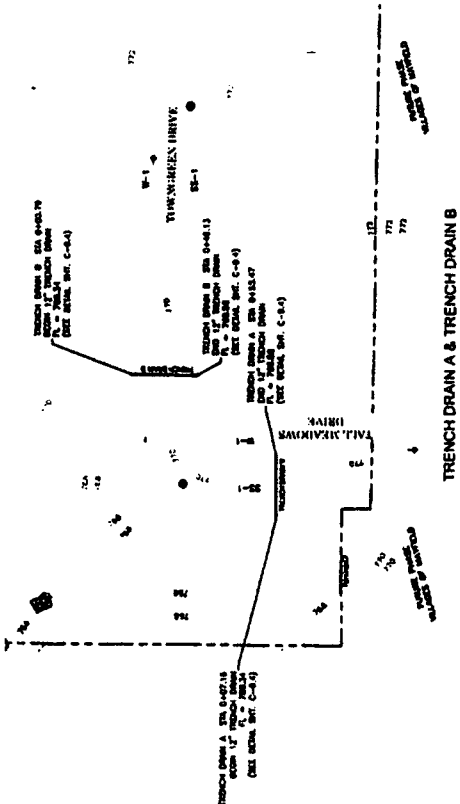
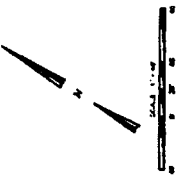


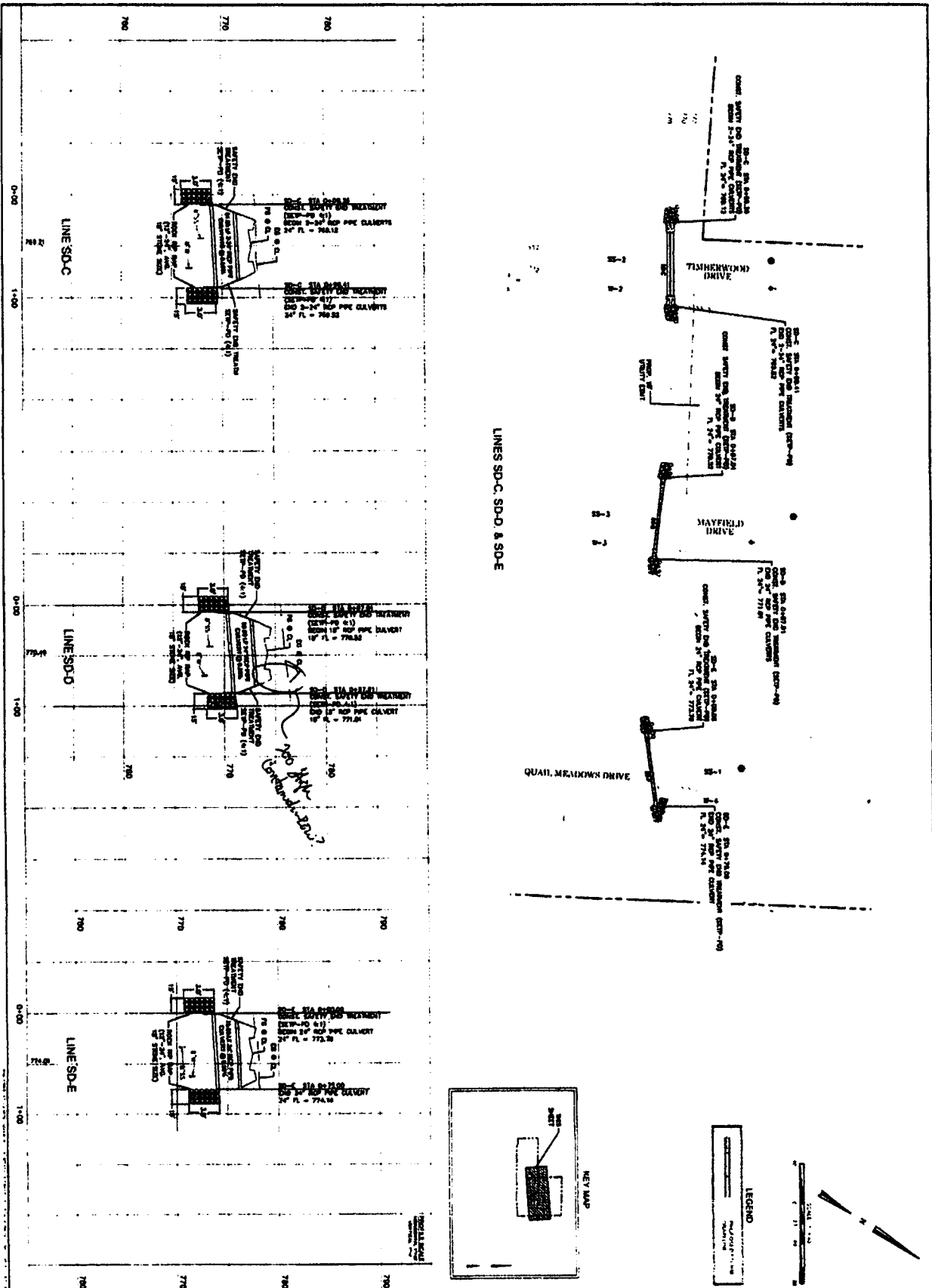
TABLE C-4.4.1 (continued)

QID#	Q	A (FT)	%	S (IN/FT)	START STA	END STA
10382	B	3.0	1.0	0.01	0+00	0+00
10383	B	3.0	1.0	0.01	0+00	0+00

LEGEND

(Symbol)	DESCRIPTION
(Symbol)	STORM TRENCH
(Symbol)	MANHOLE
(Symbol)	CATCH BASIN



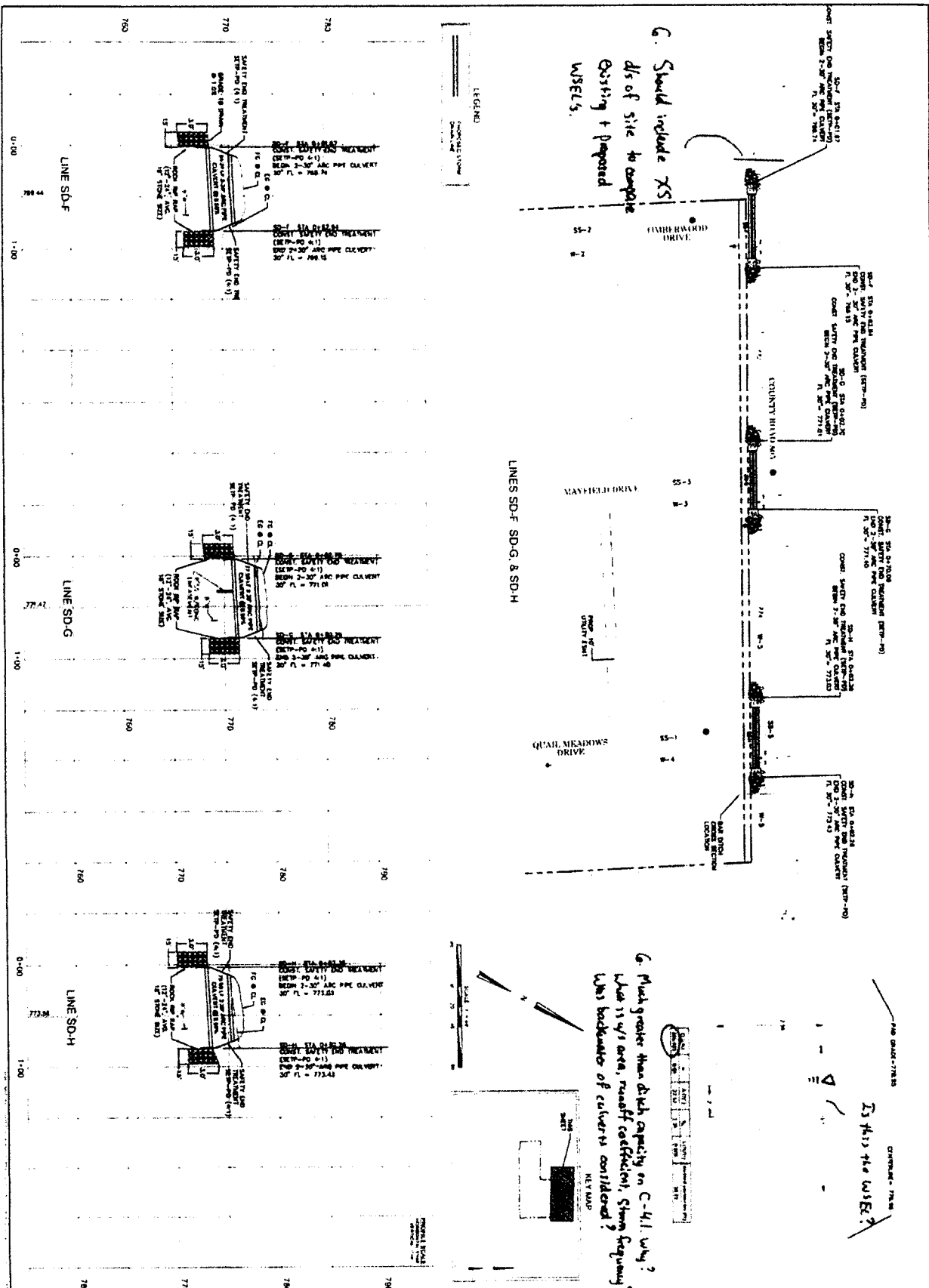


NO.	DATE	REVISION DESCRIPTION

VILLAGES OF MAYFIELD - PHASE I  
 CLEBURNE, TEXAS  
 STORM DRAIN LINES SD-C, SD-D, & SD-E

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 1400 E. NORMAN PARKWAY, Box 140 • Ft. Worth, Texas 76140  
 TELEPHONE (817) 764-7413 • FAX (817) 764-7540  
 TE LEX FROM REGISTRATION NO. 1409  
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**C-4.5**

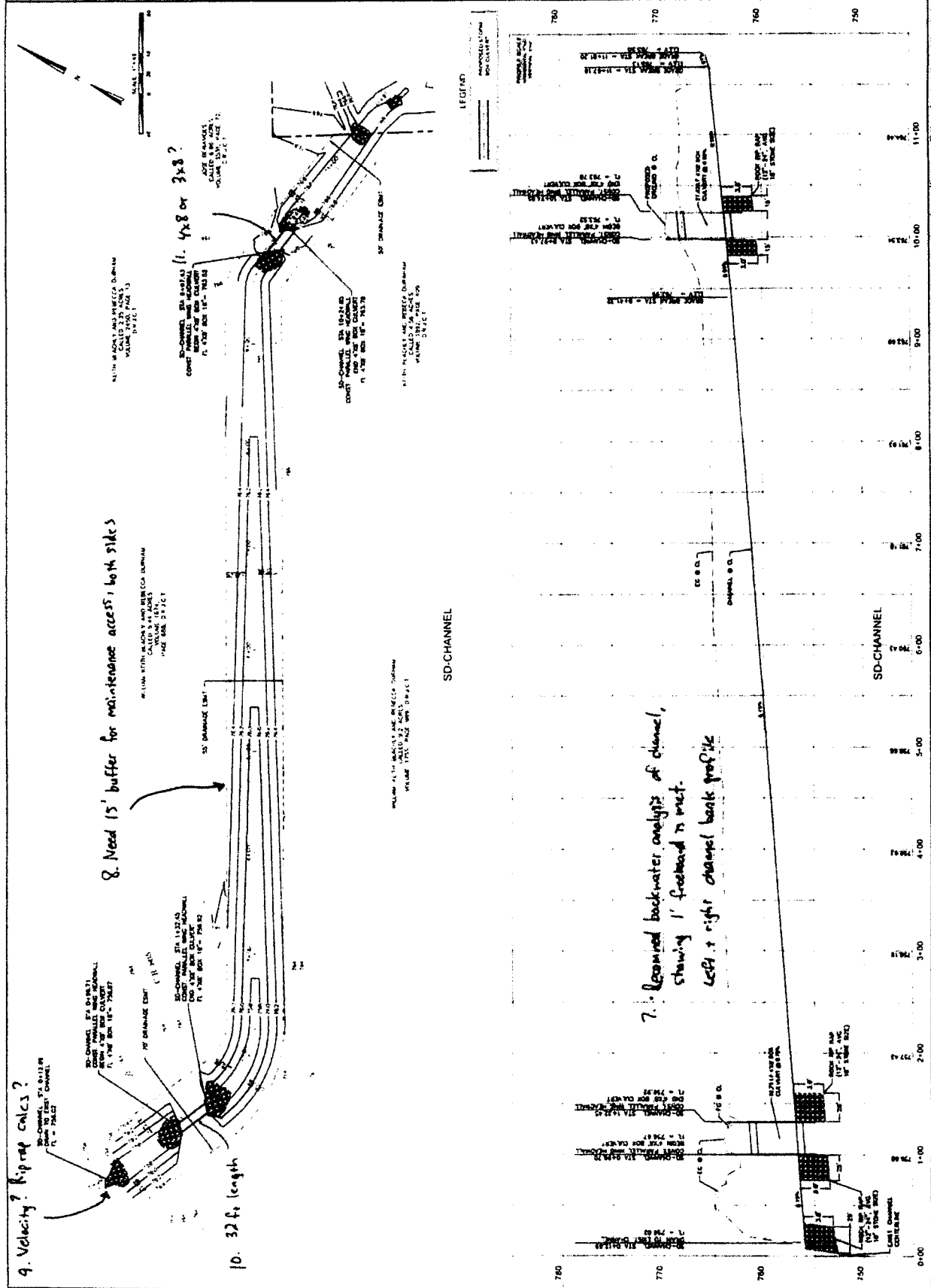


G. Should include XS  
 d/s of site to complete  
 Existing + proposed  
 WSELS.

G. Much greater than ditch capacity on C-41. Why?  
 What is yr area, runoff coefficient, Storm frequency?  
 What headwater of culverts considered?

Is this the culvert?

	<b>VILLAGES OF MAYFIELD - PHASE I</b> <b>CLEBURNE, TEXAS</b>	<b>STORM DRAIN LINES SD-F SD-G &amp; SD-H</b>								
<b>C-4.6</b> SHEET NO.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">DATE</th> <th style="width: 90%;">REVISION DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	DATE	REVISION DESCRIPTION							<p>LOYALTY INNOVATION LEGACY          1400 EVERSHAM PARKWAY, SUITE 100, FORT WORTH, TEXAS 76104          TELEPHONE: (817) 746-7910 FAX: (817) 746-7948          15 EAST FARM ROAD, SUITE 100, WAXAHACH, TEXAS 75080          WWW.TOPOGRAPHIC.COM</p>
DATE	REVISION DESCRIPTION									



9. Velocity? Pipe cap coils?

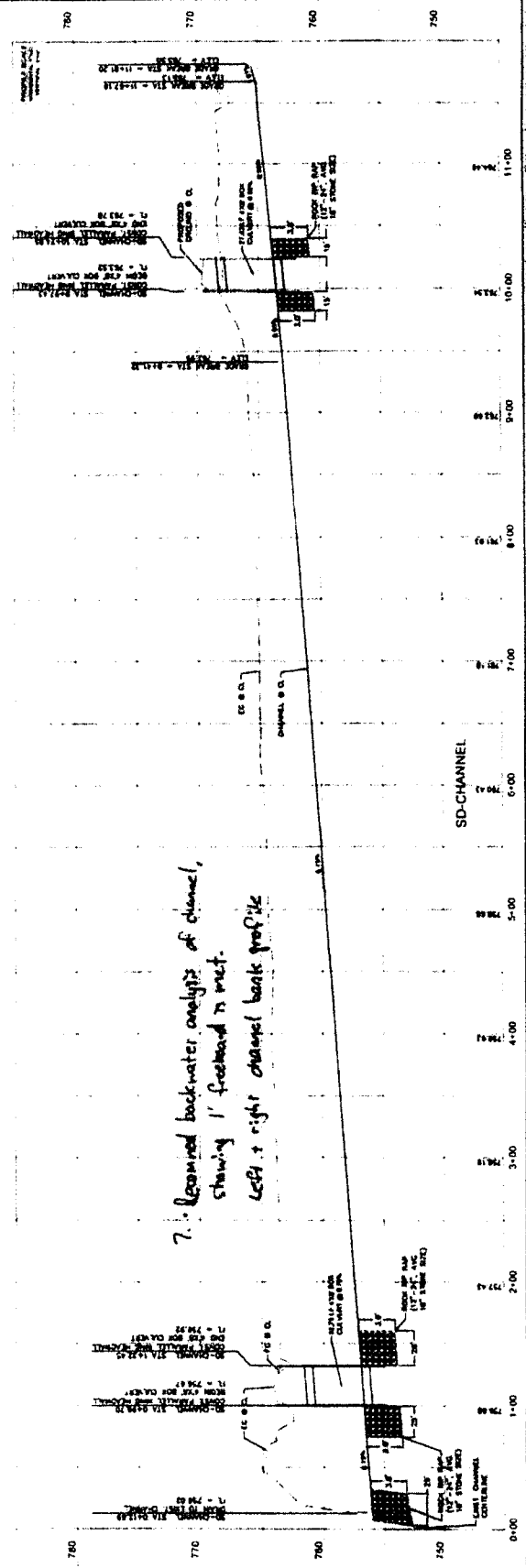
8. Need 15' buffer for maintenance access, both sides

10. 32 ft. length

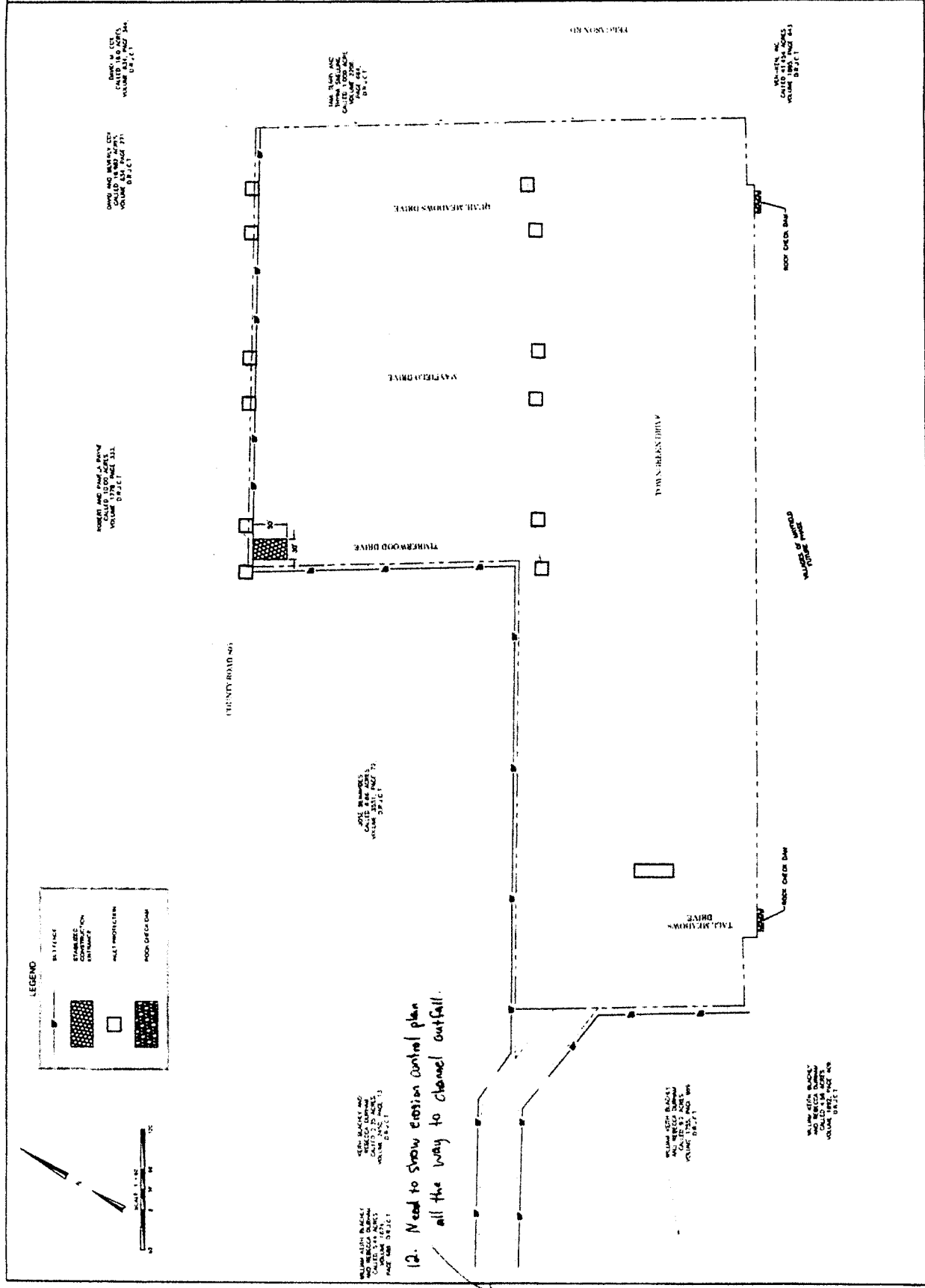
7. Examined backwater analysis of channel, showing 1' freboard in inst. Left + right channel bank profile

LEGEND

[Symbol]	MANHOLE/STRUCTURE
[Symbol]	SD-CHANNEL



NO.	DATE	REVISION DESCRIPTION



NEW ALPH BLANKS  
 100' X 100' X 10' HIGH  
 CALLED TO BE INSTALLED  
 08/11/11

NEW ALPH BLANKS  
 100' X 100' X 10' HIGH  
 CALLED TO BE INSTALLED  
 08/11/11

NEW ALPH BLANKS  
 100' X 100' X 10' HIGH  
 CALLED TO BE INSTALLED  
 08/11/11

NEW ALPH BLANKS  
 100' X 100' X 10' HIGH  
 CALLED TO BE INSTALLED  
 08/11/11

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 08/11/11

NEW ALPH BLANKS  
 100' X 100' X 10' HIGH  
 CALLED TO BE INSTALLED  
 08/11/11

NEW ALPH BLANKS  
 100' X 100' X 10' HIGH  
 CALLED TO BE INSTALLED  
 08/11/11

12. Need to show erosion control plan  
 all the way to channel outfall.

NEW ALPH BLANKS  
 100' X 100' X 10' HIGH  
 CALLED TO BE INSTALLED  
 08/11/11

NEW ALPH BLANKS  
 100' X 100' X 10' HIGH  
 CALLED TO BE INSTALLED  
 08/11/11

NEW ALPH BLANKS  
 100' X 100' X 10' HIGH  
 CALLED TO BE INSTALLED  
 08/11/11





October 24, 2019  
AVO 32083

Larry Woolley, Commissioner  
Johnson County, Precinct 4  
4300 E. FM 4  
Cleburne, TX 76031

**Re: Villages of Mayfield Phase 1 – Flood Study Review #2**

Dear Mr. Woolley:

The site plans for the referenced project were received by Halff Associates, Inc. on October 10, 2019. Dated responses to our 8/2/2019 comments by Topographic Land Surveyors along with our follow-up responses and new comments are provided below. Plan markups have been attached to help clarify comments.

1. Please ensure that the applicable notes and restrictions on drainage easements are included on the plat and/or accompanying sheets as outlined in the Subdivision Rules and Regulations of Johnson County (hereafter referred to as SRRJCO), Section IV.C. Notably missing are the following items:
  - a. City limit lines (Cleburne)  
9/25/2019 TLS: Addressed.  
10/24/19 Halff: OK.
  - b. Flood notes as outlined in Section IV.C.6  
9/25/2019 TLS: Addressed.  
10/24/19 Halff: OK.
  - c. Duties of Developer/Property Owner  
TLS 9/25/2019: These notes are specifically for plats. The plat has been approved and filed with the county. The notes have been added to the plans.  
10/24/19 Halff: Addressed.
2. Rational method calculation tables with column name "Roughness Coefficient" were assumed to be equivalent to the runoff coefficient.  
9/25/19 TLS: Addressed.  
10/24/19 Halff: OK.
3. Area OS-2 delineation on Sheet C-4.1 misses an area of approximately 24 acres which appears to drain to the proposed development, based on City of Cleburne terrain data. Please confirm the source of topography used for delineation and revise or explain the reason for the delineation at this location.  
See attached markup.  
9/25/19 TLS: The area in question was investigated thoroughly and based on the best available data (2017 NCTCOG contours) it appears the original drainage area is correct. Additional care was taken, and an additional 1.5 acres was added to the drainage area as a result.  
10/24/19 Halff: Addressed.
4. "Pre-Area 1" is shown with a runoff coefficient of 0.38, but appears it should be 0.3. Please explain if there is existing impervious area or if a different source for impervious runoff coefficient was used.  
9/25/19 TLS: The 0.38 was taken from the City of Cleburne Subdivision Ordinance. For continuity of calculations all pre-development coefficients have been changed to 0.30.  
10/24/19 Halff: Addressed.
5. Per the SRRJCO, Section D, "All storm-water drainage improvements shall be designed based upon the entire contributing drainage area being fully developed". Please show that the ditch and proposed driveway culverts on CR 805 are designed to handle the fully developed 5-year flow. Since area OS-

HALFF ASSOCIATES, INC.

4000 FOSSIL CREEK BOULEVARD  
CIRCLE WOOD, TX 76137-2720

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2 drains to the ditch, it needs to have a runoff coefficient which assumes currently undeveloped areas as being developed. See SRRJCO, Appendix A, Section D for detailed requirements.

9/25/19 TLS: Addressed. Additional culverts were added to provide capacity based on the developed conditions. Calculations are included.

10/24/19 Halff: It appears the proposed culverts and ditch have sufficient capacity; however, the 5-year runoff from area A-1 should included in the required capacities cited.

6. Please clearly show cross sections of the CR 805 ditch used for hydraulic calculations and clarify what drainage area, runoff coefficients, storm frequency, etc. were used for each calculation. The flow shown on Sheet C-4.6 is much greater (106.4 cfs) than the ditch capacity shown on Sheet C-4.1 (68.2 cfs). Please add a cross section with hydraulic calculations at a location downstream of the site to compare existing and proposed conditions. Depth of flow should be shown. Please note that the minimum capacity of ditches and driveway culvert improvements should be based on the 5-year storm frequency per SRRJCO, Appendix A, Section D.2.

9/25/19 TLS: Addressed. Cross section upstream of the first culvert and downstream of the last culvert are included showing both pre and post developed conditions.

10/24/19 Halff: The cross section hydraulic calculations shown on Sheets C-4.3 and C-4.6 do not consistently show the following information. See attached markups.

- a. Depth
- b. Storm frequency or whether it is a capacity calculation.
- c. N-values (different values shown for upstream ditch cross section on Sheets C-4.3 and C-4.6
- d. Slopes (different values shown for upstream ditch cross section)

Please check and reconcile all inputs and results, ensuring they match and that they correspond to the discharges calculated for OS-2 on sheets C-4.1 and C-4.2.

7. We recommend providing a backwater analysis of the proposed off-site drainage channel, although not required by the SRRJCO. The channel design must be adequate to convey the 100-year frequency storm plus 1 foot of freeboard.

9/25/19 TLS: Addressed. The channel is designed to convey the 100-yr flow with one foot of freeboard.

10/24/19 Halff: Noted. Backwater analysis not provided.

8. The proposed off-site drainage channel easement needs to provide a 15' buffer on each side for maintenance access per SRRJCO, Appendix A, Section E.4.

9/25/19 TLS: 15' buffer will be provided with easement. Easement will be finalized at completion of plans.

10/24/19 Halff: Acknowledged. Sheet C-4.7 shows a 55' width easement, whereas Sheet C-4.2 shows 65'. Please reconcile.

9. Please show the channel velocity at its outfall to East Buffalo Creek. Recommend providing riprap sizing calculations to confirm adequate erosion protection is provided.

9/25/19 TLS: Addressed. Channel velocity is shown, and rip rap sizing calculations are included.

Length of apron was calculated using iSWM Figure 4.3.

10/24/19 Halff: Addressed.

10. Sheet C-4.3 hydraulic calculations for the 4x8 culvert crossing at CR 805 show a length of 16 feet, but the profile shows a length of 32 ft. Please clarify correct culvert length.

9/25/19 TLS: Addressed.

10/24/19 Halff: OK.

11. Sheet C-4.3 shows the channel driveway culvert crossing as 3x8, but the plan sheet C-4.7 shows 4x8. Please reconcile.

9/25/19 TLS: Addressed. All culvert will be 4'x8'.



10/24/19 Halff: OK.

12. Sheet C-7.1 erosion control plan does not show the off-site drainage channel to its outfall into East Buffalo Creek. Please include an erosion control plan for the entire channel, ensuring compliance with SSRRJCO, Appendix A, Section E.8

9/25/19 TLS: Addressed.

10/24/19 Halff: OK.

13. Since this development is greater than 5 acres, it falls under the "large construction site" category as defined by TCEQ and will need to comply with the Texas Pollutant Discharge Elimination System (TPDES) Construction General Permit Number TXR150000.

9/25/19 TLS: Acknowledged.

10/24/19 Halff: OK.

#### New Comments

14. Sheet C-4.1: OS-1 runoff calculations not shown in the table. Please add.
15. Sheet C-4.1: Why are intensities for OS-2 different for developed and undeveloped conditions when the time of concentration and storm recurrence are the same? Also, the time of concentration for larger area OS-2 is 10 minutes, whereas the smaller P-1 is 20 minutes. Please clarify or revise.
16. Please note that the minimum time of concentration for residential areas is 15 minutes per SSRJCO Appendix A, D.1.b. Since the value of 10 minutes used is conservative, no action is required. However, if the drainage design components are modified as a result of this comment, please respond with what has changed.

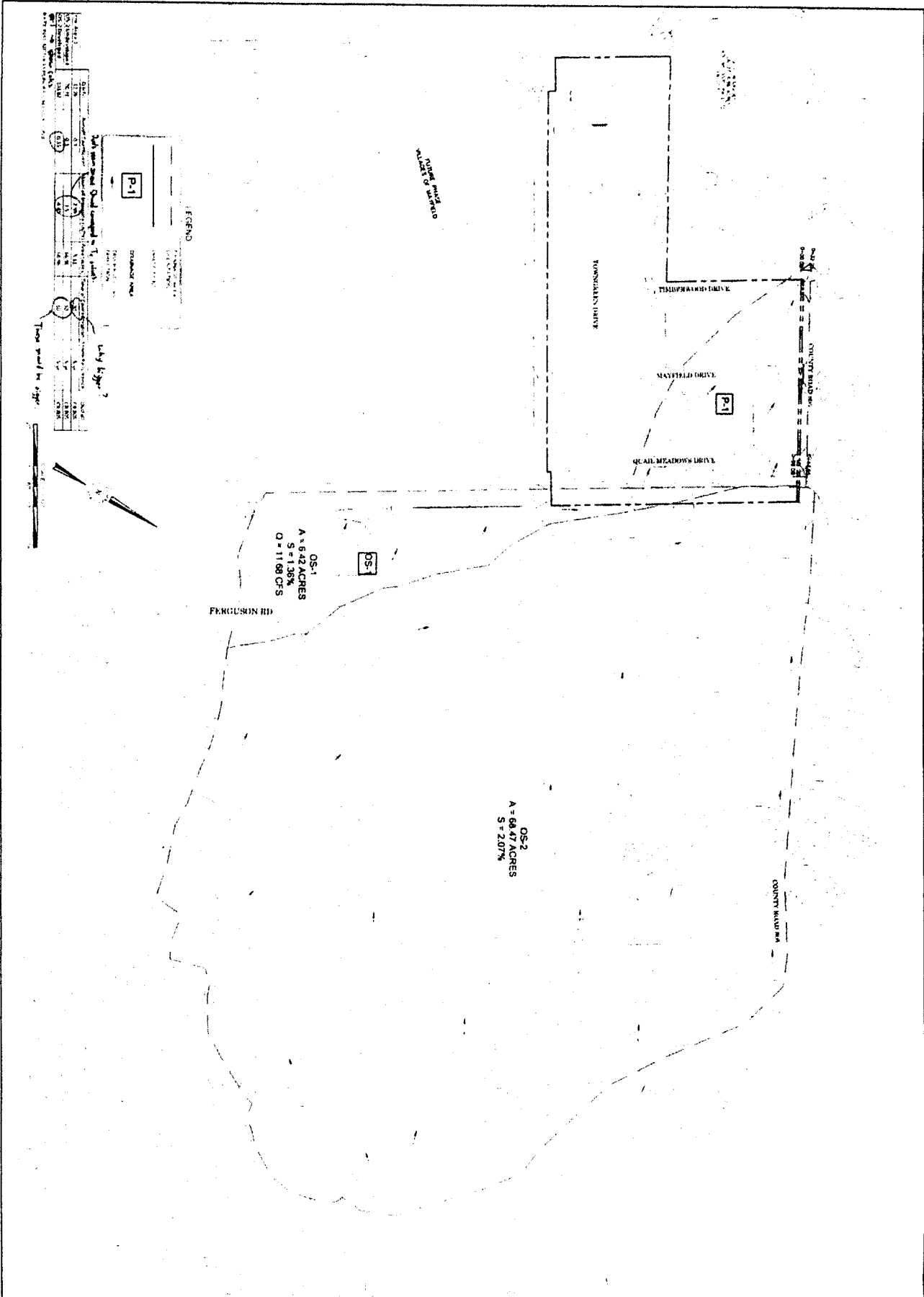
**Please provide a written response to the above comments with the next submittal. Items revised in response to these comments may generate additional comments.**

If you have any questions or need additional information, please do not hesitate to call me at (817) 764-7481, or Ben Pylant at (817) 764-7488.

Sincerely,  
HALFF ASSOCIATES, INC.  
TBPE Firm No. 312

A handwritten signature in black ink, appearing to read "Randy Dueck".

Randy Dueck, P.E., CFM



C4.1



NO	DATE	REVISION DESCRIPTION

VILLAGES OF MAYFIELD - PHASE I  
 CLEBURNE, TEXAS  
 PRE-DEVELOPMENT DRAINAGE MAP

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 TEXAS FIRM REGISTRATION NO. 18408  
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**REVISIONS**

NO.	DATE	REVISION DESCRIPTION
1	01/20/21	ISSUE FOR PERMIT
2	02/03/21	REVISED PER CITY COMMENTS
3	02/25/21	REVISED PER CITY COMMENTS
4	03/02/21	REVISED PER CITY COMMENTS
5	03/09/21	REVISED PER CITY COMMENTS
6	03/16/21	REVISED PER CITY COMMENTS
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100	01/01/23	REVISED PER CITY COMMENTS

**LEGEND**

**A-1** PROPERTY LINE

**OS-1** OPEN SPACE

**CP** CONCRETE PAVEMENT

**AS** ASPHALT SURFACE

**LS** LIKELY SURFACE

**ES** EARTH SURFACE

**GS** GRAVEL SURFACE

**WS** WOOD SURFACE

**MS** MAINTENANCE SURFACE

**VS** VEGETATED SURFACE

**WS** WATER SURFACE

**ES** EARTH SURFACE

**GS** GRAVEL SURFACE

**WS** WOOD SURFACE

**MS** MAINTENANCE SURFACE

**VS** VEGETATED SURFACE

**WS** WATER SURFACE

**ES** EARTH SURFACE

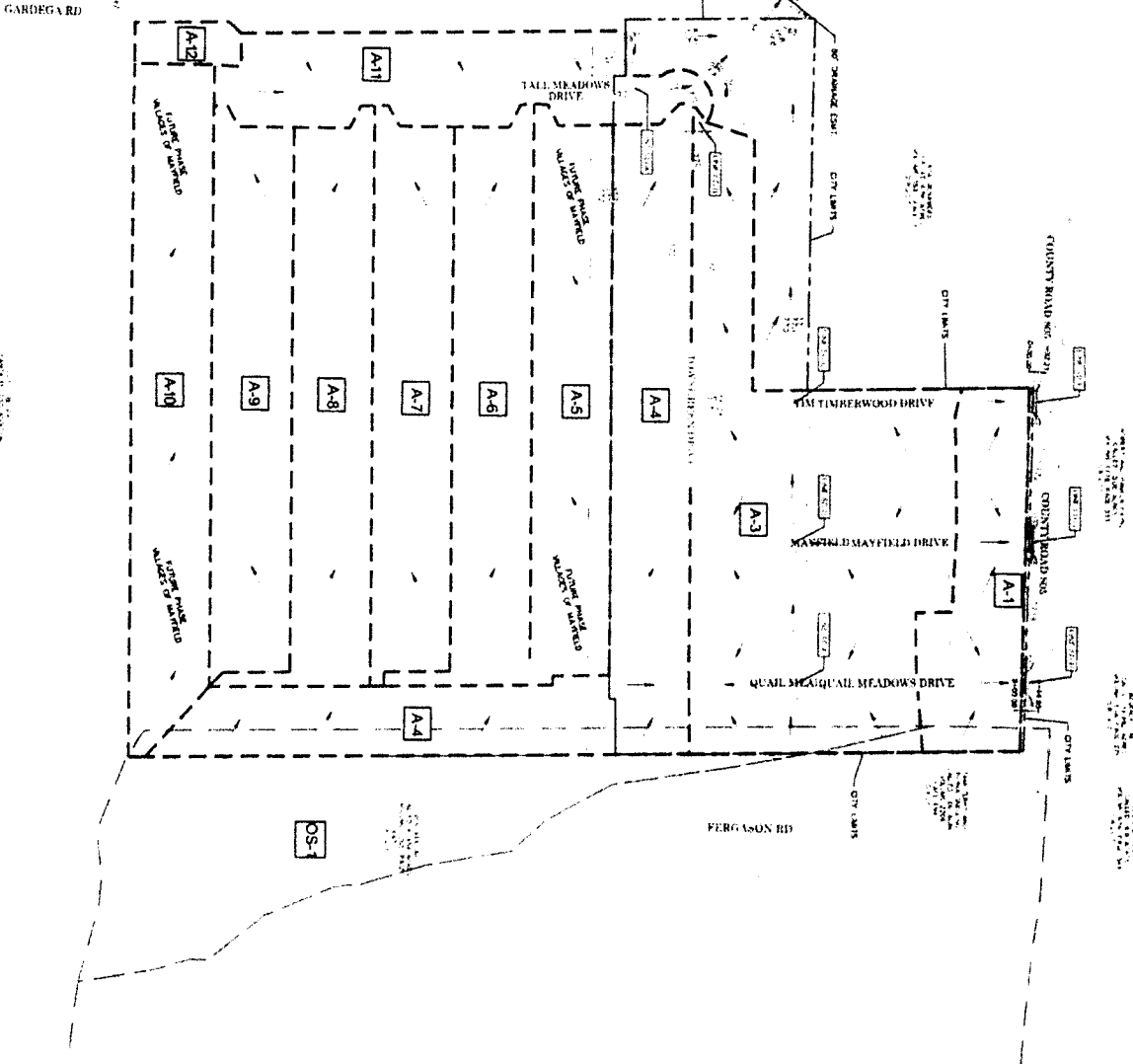
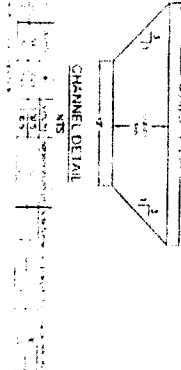
**GS** GRAVEL SURFACE

**WS** WOOD SURFACE

**MS** MAINTENANCE SURFACE

**VS** VEGETATED SURFACE

**WS** WATER SURFACE



C-4.2



NO.	DATE	REVISION DESCRIPTION

VILLAGES OF MAYFIELD - PHASE I  
CLEBURNE, TEXAS  
DRAINAGE AREA MAP

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TEXAS PROFESSIONAL REGISTRATION NO. 14406  
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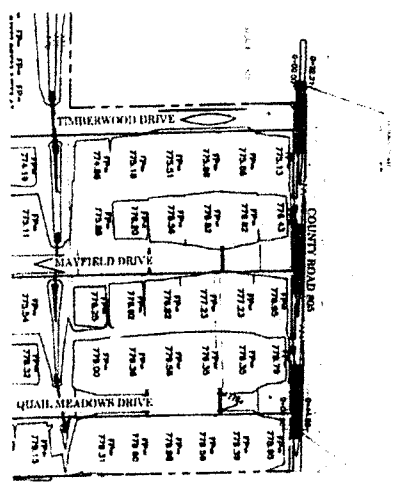
**7.12.12 - Survey Control Data**

Station: 1+00.00  
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 Instrument: Leica TS11  
 Reflector: 1.5m  
 Prism: 1.5m  
 Date: 12/12/12

**7.12.12 - Detailed Control Data**

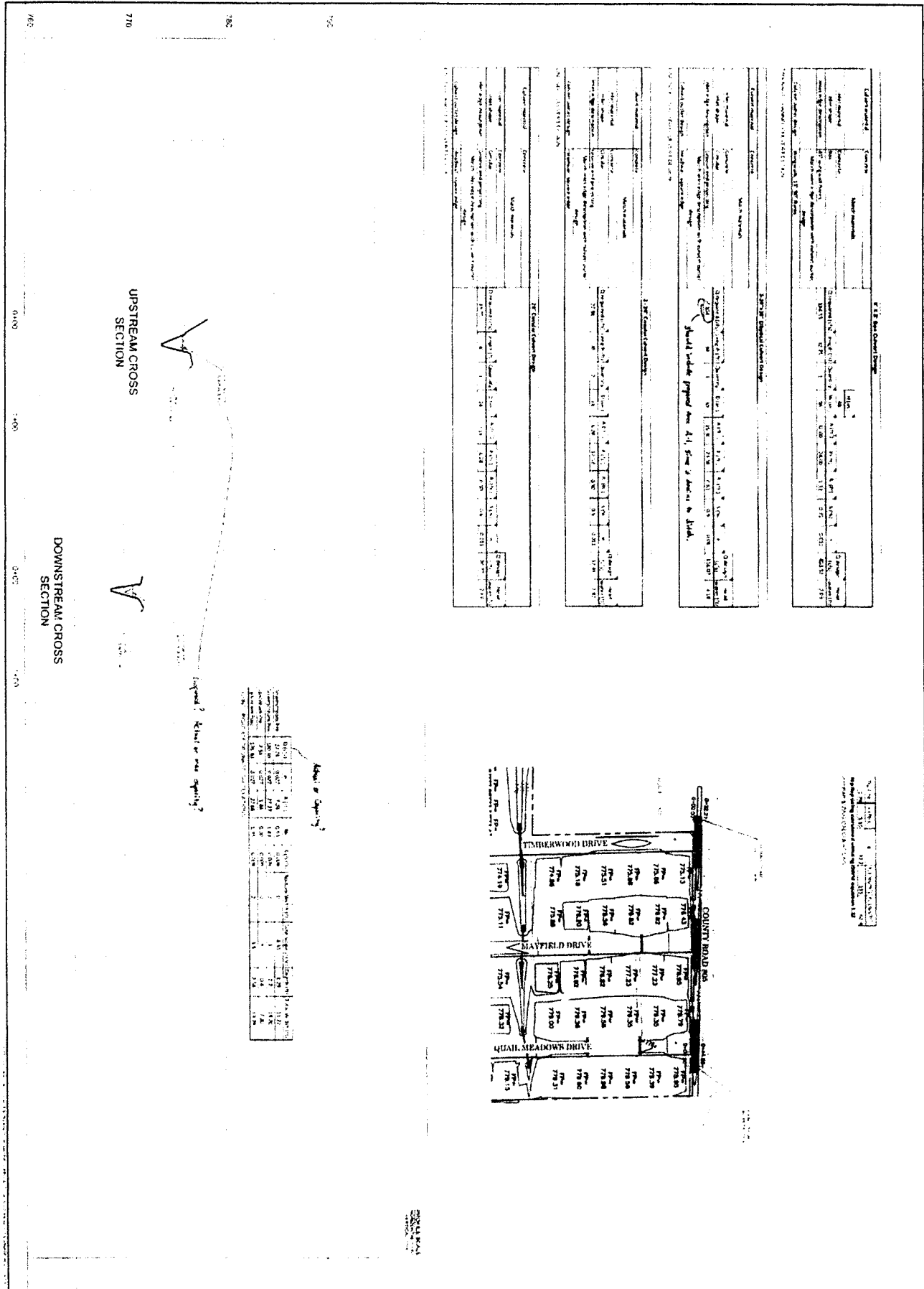
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1+15.00	100.00	Leica TS11	1.5m	1.5m
1+20.00	100.00	Leica TS11	1.5m	1.5m
1+25.00	100.00	Leica TS11	1.5m	1.5m
1+30.00	100.00	Leica TS11	1.5m	1.5m
1+35.00	100.00	Leica TS11	1.5m	1.5m
1+40.00	100.00	Leica TS11	1.5m	1.5m
1+45.00	100.00	Leica TS11	1.5m	1.5m
1+50.00	100.00	Leica TS11	1.5m	1.5m

*Should include proposed new 4:1 slope of ditches to bridge.*



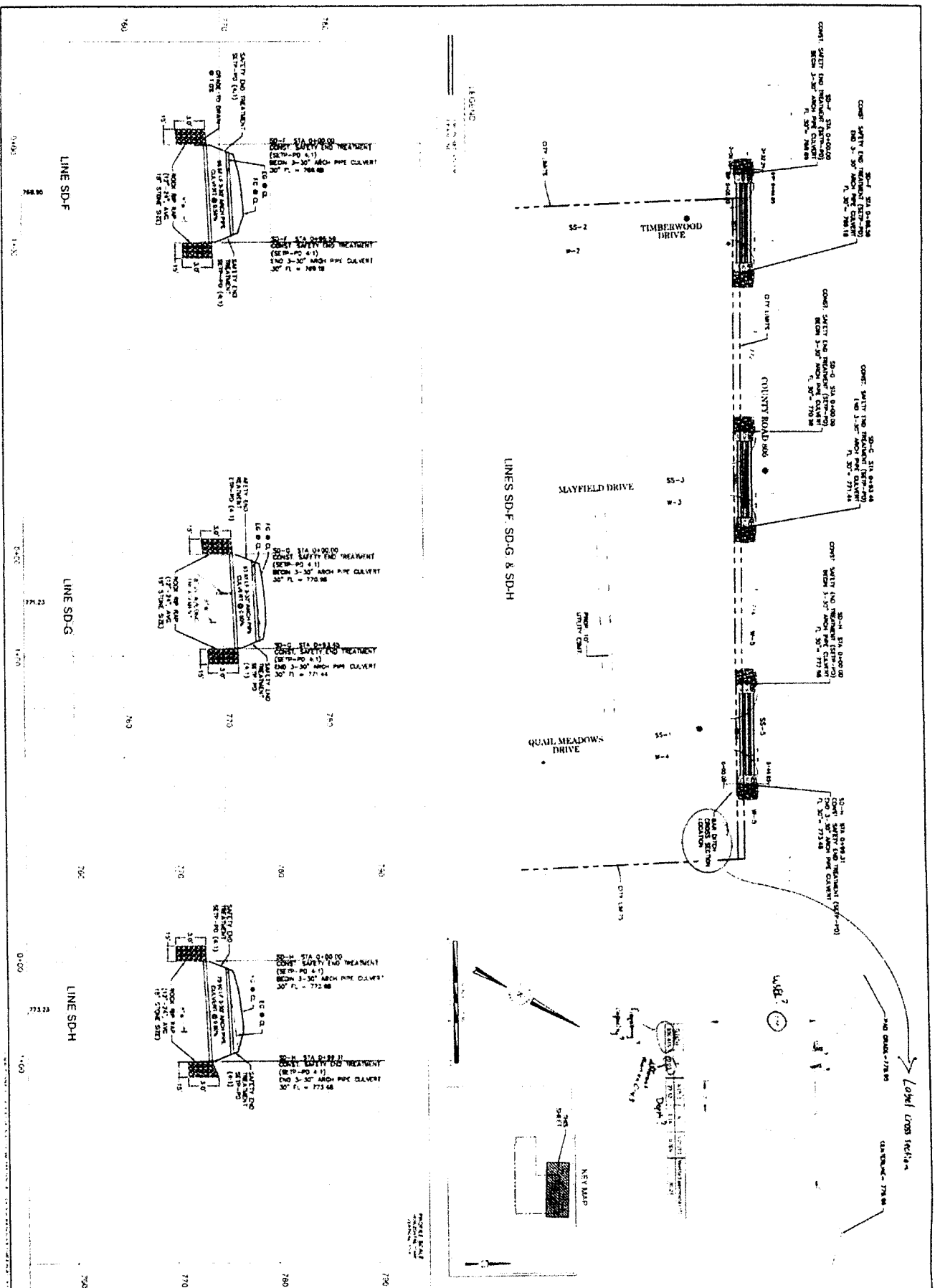
*Adjacent to property?*


Station	Elevation	Instrument	Reflector	Prism
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1+15.00	100.00	Leica TS11	1.5m	1.5m
1+20.00	100.00	Leica TS11	1.5m	1.5m
1+25.00	100.00	Leica TS11	1.5m	1.5m
1+30.00	100.00	Leica TS11	1.5m	1.5m
1+35.00	100.00	Leica TS11	1.5m	1.5m
1+40.00	100.00	Leica TS11	1.5m	1.5m
1+45.00	100.00	Leica TS11	1.5m	1.5m
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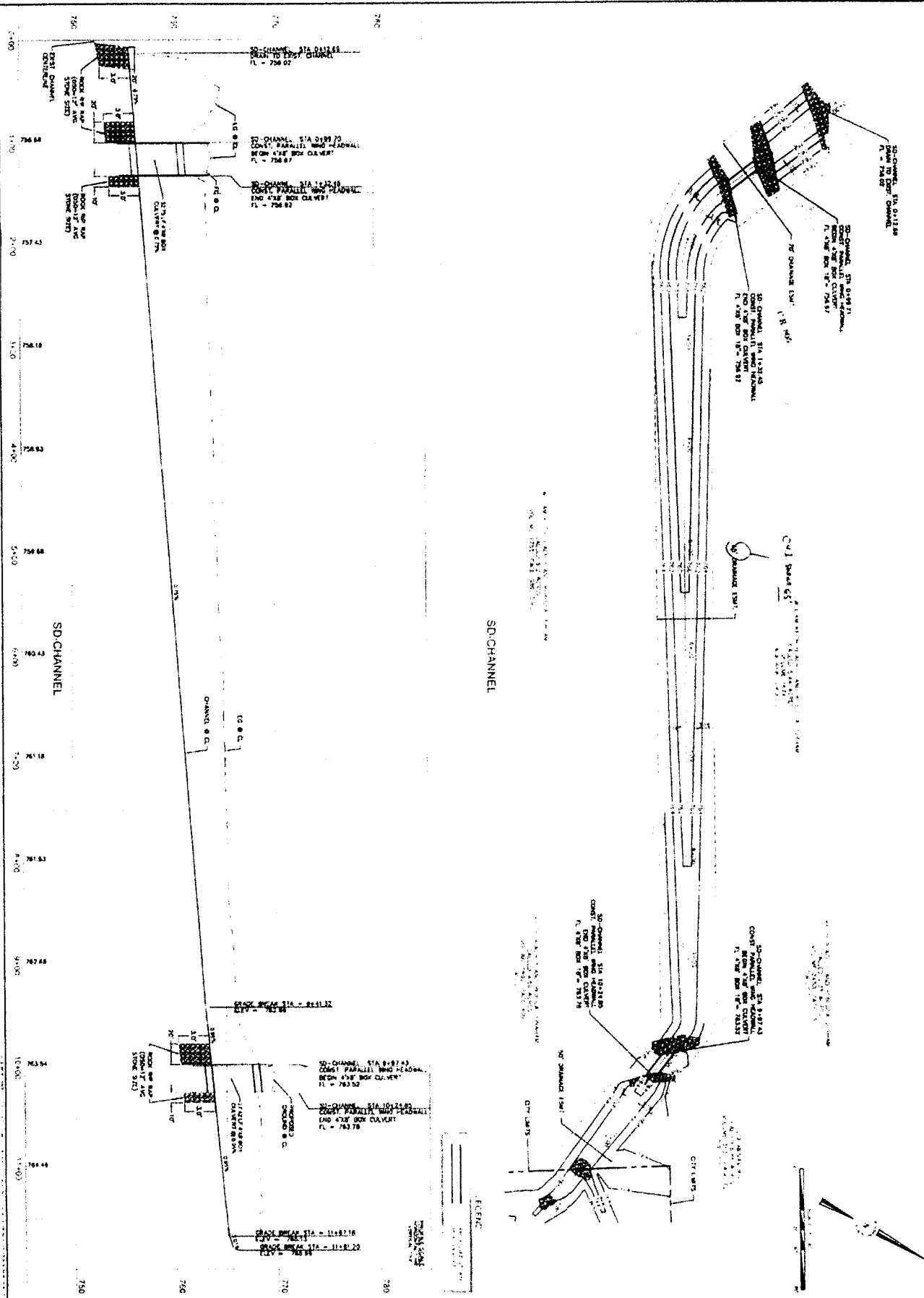


	NO	DATE	REVISION DESCRIPTION
<b>VILLAGES OF MAYFIELD - PHASE I CLEBURNE, TEXAS</b>			
<b>CULVERT CALCULATIONS</b>			
		1400 EVERMAN PARKWAY, Ste. 106 • FT. WORTH, TEXAS 76140 TELEPHONE: (817) 744-7112 • FAX: (817) 744-7548 TEXAS FIRM REGISTRATION NO. 14108 WWW.TOPOGRAPHIC.COM	

C-4.3



	<b>C-4.6</b> <small>DATE: 10/15/2024</small>	<b>VILLAGES OF MAYFIELD - PHASE I</b> <b>CLEBURNE, TEXAS</b>	<b>STORM DRAIN LINES SD-F SD-G &amp; SD-H</b>
	<small>PROJECT NO. 24-001</small>	<b>TOPOGRAPHIC</b> <small>LOYALTY INNOVATION LEGACY</small> 1400 EVERMAN PARKWAY, SUITE 100 • FT. WORTH, TEXAS 76140 TELEPHONE: (817) 744-7812 • FAX: (817) 744-7548 TEXAS FIRM REGISTRATION NO. 18438 WWW.TOPOGRAPHIC.COM	



**C-4.7**

PROJECT NO. 219

NO.	DATE	REVISION DESCRIPTION

**VILLAGES OF MAYFIELD - PHASE I**  
**CLEBURNE, TEXAS**

**STORM DRAIN CHANNEL**

**TOPOGRAPHIC**  
 LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, S.W. 146 - FT. WORTH, TEXAS 76160  
 TELEPHONE: (817) 744-7512 - FAX: (817) 744-7548  
 TEXAS FIRM REGISTRATION NO. 14409  
 WWW.TOPOGRAPHIC.COM





November 21, 2019  
AVO 32083

Larry Woolley, Commissioner  
Johnson County, Precinct 4  
4300 E. FM 4  
Cleburne, TX 76031

**Re: Villages of Mayfield Phase 1 – Flood Study Review #3**

Dear Mr. Woolley:

The site plans for the referenced project were received by Halff Associates, Inc. on November 13, 2019. At this time, all comments have been addressed and we recommend approval of the flood study.

If you have any questions or need additional information, please do not hesitate to call me at (817) 764-7481, or Ben Pylant at (817) 764-7488.

Sincerely,  
**HALFF ASSOCIATES, INC.**  
TBPE Firm No. 312

A handwritten signature in black ink, appearing to read "Randy Dueck", is written over the typed name.

Randy Dueck, P.E., CFM