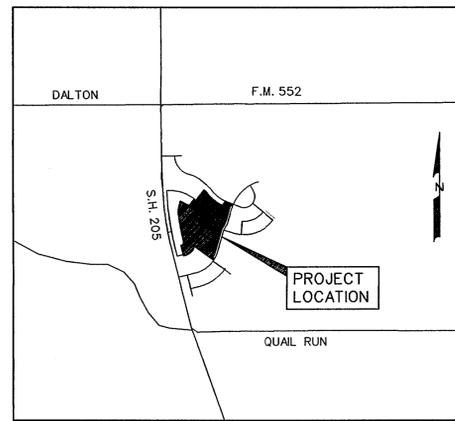


DEVELOPMENT PLANS  
FOR  
STONE CREEK  
PHASE III  
CITY OF ROCKWALL, TEXAS

INDEX

|     |   |
|-----|---|
| 1   | TITLE   |
| 2   | PLAT  |
| 3   | DRAINAGE AREA MAP   |
| 4   | AMHERST DRIVE   |
| 5   | AMHERST DRIVE, HARVARD DRIVE                                    |
| 6   | BARRYMORE DRIVE   |
| 7   | BARRYMORE DRIVE   |
| 8   | FEATHERSTONE DRIVE SLIP ROAD                                    |
| 9   | WATER AND SANITARY SEWER PLAN                                   |
| 10  | SANITARY SEWER PROFILES   |
| 11  | STORM SEWER PLAN AND PROFILE LINES 'D-1' & 'D-2'                |
| 12  | STORM SEWER PLAN AND PROFILE LINES 'D-3' & 'D-4'                |
| 13  | STORM SEWER PLAN AND PROFILE LINES 'D-5', 'D-6', 'D-7', & 'D-8' |
| 14  | DETENTION POND PLAN   |
| 15  | DETENTION CALCULATIONS ULTIMATE DESIGN                          |
| 15B | FLOOD STUDY WORKMAP   |
| 16  | GRADING PLAN  |
| 17  | GRADING PLAN  |
| 18  | POLLUTION PREVENTION PLAN                                       |
|     | TREE SURVEY   |



VICINITY MAP  
NOT TO SCALE

PREPARED FOR  
STONE CREEK 80/100' POD, LTD.  
8214 WESTCHESTER DRIVE, SUITE 710 DALLAS, TEXAS 75225

|                                 |   |                             |
|---------------------------------|---|-----------------------------|
| <u>CORWIN ENGINEERING, INC.</u> | — | <u>CONSULTING ENGINEERS</u> |
| 200 W. BELMONT, SUITE E         |   | ALLEN, TEXAS 75013          |

NOTE:  
CITY OF ROCKWALL STANDARDS  
AND NCTCOG 3rd ADDITION STANDARDS  
SHALL BE USED FOR REFERENCE.

AS-BUILT  
APRIL 2013  
BASED ON SURVEYING AT  
THE SITE AND INFORMATION  
PROVIDED BY CONTRACTORS

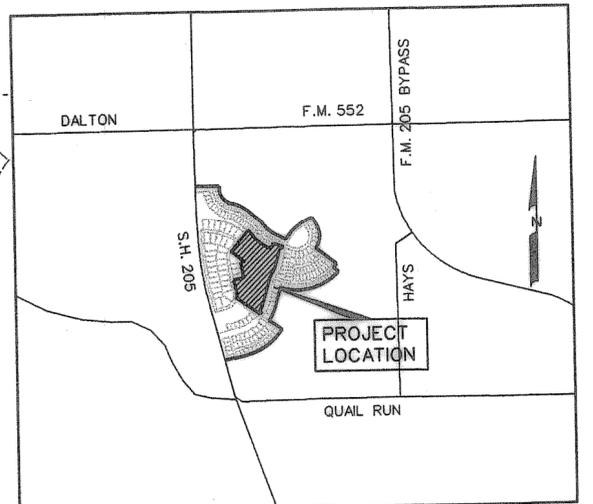
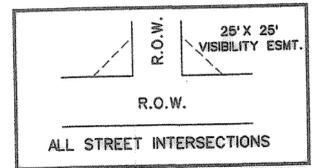


The seal appearing on  
this document was  
authorized by  
Brandon Davidson  
P.E. 87682, on  
April 10, 2013

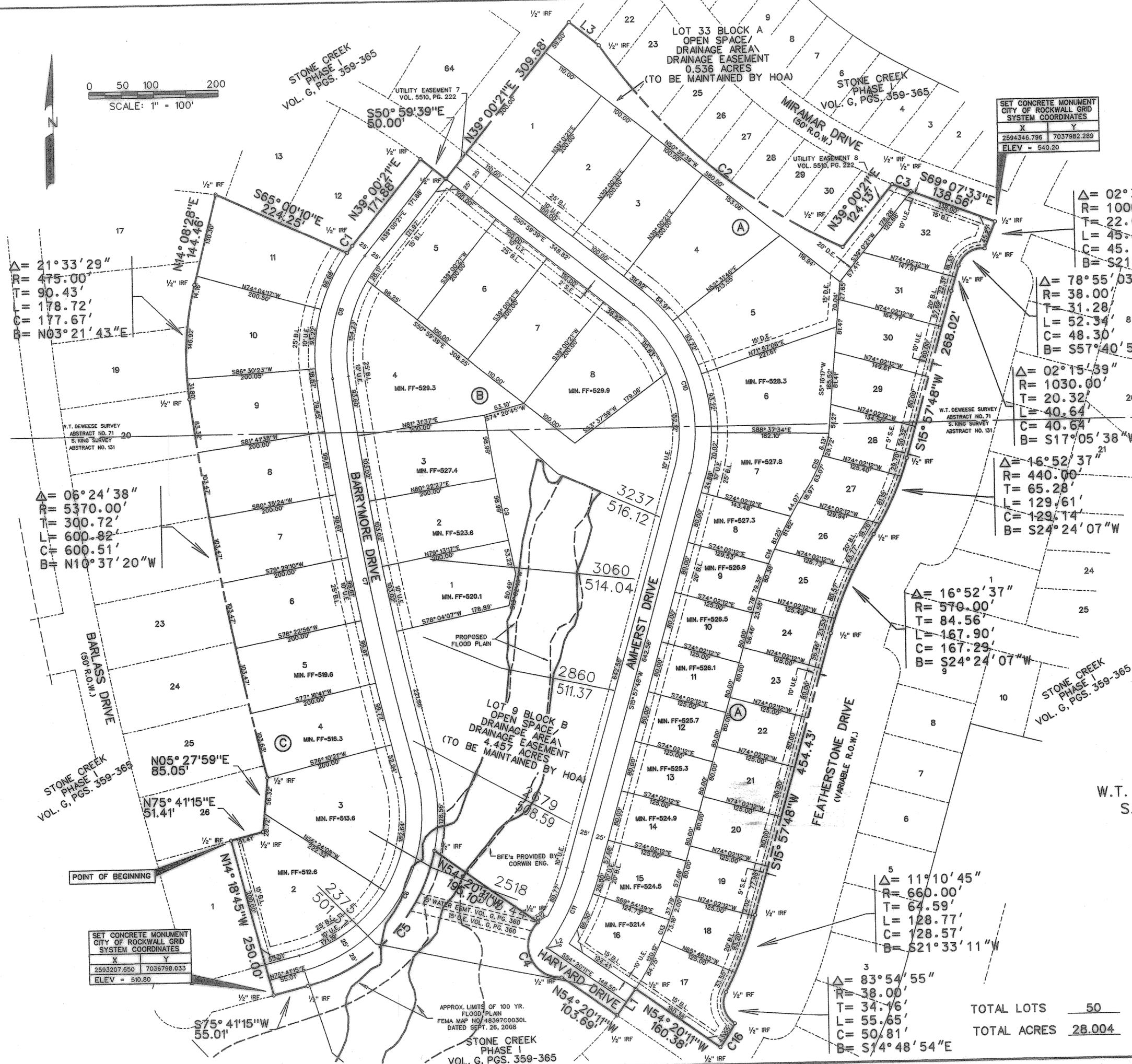
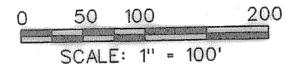
- NOTES**
- Bearing are referenced to Stone Creek Phase I (Vol. G, Pg. 359-365).
  - All lot lines are radial or perpendicular to the street unless otherwise noted by bearing.
  - 1/2" iron rods with "CORWIN ENGR. INC." caps set at all boundary corners, block corners, points of curvature, points of tangency, and angle points in public right-of-way unless otherwise noted.
  - B.L. - Building Line.  
U.E. - Utility Easements.  
C.M. - Controlling Monument.  
D.E. - Drainage Easement  
F.F. - Finish Floor  
V.A.M.S. - Visibility, Maintenance & Sidewalk Easement  
BFE - Base Flood Elevation  
S.E. - Sidewalk Easement
  - All open spaces, drainage areas and other common areas shall be maintained by the Homeowners Association.

SET CONCRETE MONUMENT  
CITY OF ROCKWALL GRID  
SYSTEM COORDINATES

| X             | Y           |
|---------------|-------------|
| 2594346.796   | 7037982.289 |
| ELEV = 540.20 |             |



FINAL PLAT  
OF  
**STONE CREEK  
PHASE III**  
OUT OF THE  
W.T. DEWEESE SURVEY, ABSTRACT NO. 71  
S. KING SURVEY, ABSTRACT NO. 131  
IN THE  
CITY OF ROCKWALL  
ROCKWALL COUNTY, TEXAS  
OWNERS  
**STONE CREEK 80/100' POD, LTD.**  
8214 WESTCHESTER DRIVE, SUITE 710  
DALLAS, TEXAS 75219  
214-522-4945  
PREPARED BY  
**CORWIN ENGINEERING, INC.**  
200 W. BELMONT, SUITE E  
ALLEN, TEXAS 75013  
972-396-1200



FILED FOR RECORD  
ROCKWALL COUNTY CLERK  
SHELL MILLER  
DEPUTY  
12 OCT 11 PM 12:18

LEGAL DESCRIPTION

WHEREAS, STONE CREEK 80/100' POD, LTD., is the owner of a tract of land situated in the W.T. Deweese Survey, Abstract No. 71 and the S. King Survey, Abstract No. 131, in the City of Rockwall, Rockwall County, Texas, being part of Tract 1 and Tract 2, as described in Clerks File No. 2007-00375398, in the Deed Records of Rockwall County, Texas, and being more particularly described as follows:

BEGINNING, at a 1/2 inch iron rod found at the northeast corner of Lot 1 Block C out of Stone Creek Phase I, an addition to the City of Rockwall, as described in Volume G, Pages 359-365, in the Plat Records of Rockwall County;

THENCE, North 75° 41' 15" East, along an interior east line of said Stone Creek Phase I, for a distance of 51.41 feet, to a 1/2 inch iron rod found;

THENCE, North 05° 27' 59" East, continuing along said interior east line, for a distance of 85.05 feet, to a 1/2 inch iron rod found on a curve to the right, having a radius of 5370.00 feet, a central angle of 06° 24' 38", and a tangent of 300.72 feet;

THENCE, continuing along said interior east line and with said curve to the right for an arc distance of 600.82 feet (Chord Bearing North 10° 37' 20" West - 600.51 feet), to a 1/2 inch iron rod found at the point of compound curvature of a curve to the right, having a radius of 475.00 feet, a central angle of 21° 33' 29", and a tangent of 90.43 feet;

THENCE, continuing along said interior east line and with said curve to the right for an arc distance of 178.72 feet (Chord Bearing North 03° 21' 43" East - 177.67 feet), to a 1/2 inch iron rod found at the point of tangency;

THENCE, North 14° 08' 28" East, continuing along said interior east line, for a distance of 144.46 feet, to a 1/2 inch iron rod found at the northeast corner of Lot 17 Block C, out of said Stone Creek Phase I;

THENCE, South 65° 00' 10" East, along the interior north line of said Stone Creek Phase I, for a distance of 224.25 feet, to a 1/2 inch iron rod found on a curve to the right, having a radius of 275.00 feet, a central angle of 02° 53' 33", and a tangent of 6.94 feet;

THENCE, continuing along said interior north line and with said curve to the right for an arc distance of 13.88 feet (Chord Bearing North 37° 33' 34" East - 13.88 feet), to a 1/2 inch iron rod found at the point of tangency;

THENCE, North 39° 00' 21" East, continuing along said interior north line, for a distance of 171.88 feet, to a 1/2 inch iron rod found;

THENCE, South 50° 59' 39" East, continuing along said interior north line, for a distance of 50.00 feet, to a 1/2 inch iron rod found;

THENCE, North 39° 00' 21" East, continuing along said interior north line, for a distance of 309.58 feet, to a 1/2 inch iron rod found;

THENCE, South 50° 59' 39" East, continuing along said interior north line, for a distance of 58.55 feet, to a 1/2 inch iron rod found on a non-tangent curve to the left, having a radius of 920.00 feet, a central angle of 30° 59' 47", and a tangent of 255.11 feet;

THENCE, continuing along said interior north line and with said curve to the left for an arc distance of 497.71 feet (Chord Bearing South 49° 17' 54" East - 491.66 feet); to a 1/2 inch iron rod found;

THENCE, North 39° 00' 21" East, continuing along said interior north line, for a distance of 124.13 feet, to a 1/2 inch iron rod found on a curve to the left, having a radius of 800.00 feet, a central angle of 02° 12' 28", and a tangent of 15.42 feet;

THENCE, continuing along said interior north line and with said curve to the left for an arc distance of 30.83 feet (Chord Bearing South 68° 01' 19" East - 30.82 feet), to a 1/2 inch iron rod found at the point of tangency;

THENCE, South 69° 07' 33" East, for a distance of 138.56 feet, to a 1/2 inch iron rod found at the southwest intersection of Miramar Drive (50' R.O.W.) and Featherstone Drive (Variable R.O.W.), being on a non-tangent curve to the left, having a radius of 1000.00 feet, a central angle of 02° 35' 38", and a tangent of 22.64 feet;

THENCE, along the interior east line of said Stone Creek Phase I and with said curve to the left for an arc distance of 45.27 feet (Chord Bearing South 21° 39' 30" West - 45.27 feet), to a 1/2 inch iron rod found on a curve to the left, having a radius of 38.00 feet, a central angle of 78° 55' 03", and a tangent of 31.28 feet;

THENCE, continuing along said east line and with said curve to the left for an arc distance of 52.34 feet (Chord Bearing South 57° 40' 59" West - 48.30 feet), to a 1/2 inch iron rod found at the point of compound curvature of a curve to the left, having a radius of 1030.00 feet, a central angle of 02° 15' 39", and a tangent of 20.32 feet;

THENCE, continuing along said interior east line and with said curve to the left of an arc distance of 40.64 feet (Chord Bearing South 17° 05' 38" West - 40.64 feet), to a 1/2 inch iron rod found at the point of tangency;

THENCE, South 15° 57' 48" West, continuing along said interior east line, for a distance of 268.02 feet, to a 1/2 inch iron rod found at the point of curvature of a curve to the right, having a radius of 440.00 feet, a central angle of 16° 52' 37", and a tangent of 65.28 feet;

THENCE, continuing along said interior east line and with said curve to the right for an arc distance of 129.61 feet (Chord Bearing South 24° 24' 07" West - 129.14 feet), to a 1/2 inch iron rod found at the point of reverse curvature of a curve to the left, having a radius of 570.00 feet, a central angle of 16° 52' 37", and a tangent of 84.56 feet;

THENCE, continuing along said interior east line and with said curve to the left for an arc distance of 167.90 feet (Chord Bearing South 24° 24' 07" West - 167.29 feet), to a 1/2 inch iron rod found at the point of tangency;

THENCE, South 15° 57' 48" West, continuing along said interior east line, for a distance of 454.43 feet, to a 1/2 inch iron rod found at the point of curvature of a curve to the right, having a radius of 660.00 feet, a central angle of 11° 10' 45", and a tangent of 64.59 feet;

THENCE, continuing along said interior east line and with said curve to the right for an arc distance of 128.77 feet (Chord Bearing South 21° 33' 11" West - 128.57 feet), to a 1/2 inch iron rod found at the point of reverse curvature of a curve to the left, having a radius of 38.00 feet, a central angle of 83° 54' 55", and a tangent of 34.16 feet;

THENCE, continuing along said interior east line and with said curve to the left for an arc distance of 55.65 feet (Chord Bearing South 14° 48' 54" East - 50.81 feet), to a 1/2 inch iron rod found on a non-tangent curve to the right, having a radius of 695.00 feet, a central angle of 03° 35' 24", and a tangent of 21.78 feet;

THENCE, continuing along said interior east line and with said curve to the right for an arc distance of 43.55 feet (Chord Bearing South 32° 03' 15" West - 43.54 feet), to a 1/2 inch iron rod found at the northwest intersection of said Featherstone Drive and Harvard Drive (50' R.O.W.);

THENCE, North 54° 20' 11" West, along the interior south line of said Stone Creek Phase I, for a distance of 160.38 feet, to a 1/2 inch iron rod found;

THENCE, South 35° 39' 49" West, continuing along said interior south line, for a distance of 50.00 feet, to a 1/2 inch iron rod found;

THENCE, North 54° 20' 11" West, continuing along said interior south line, for a distance of 103.69 feet, to a 1/2 inch iron rod found on a non-tangent curve to the right, having a radius of 50.00 feet, a central angle of 138° 24' 25", and a tangent of 131.65 feet;

THENCE, along said curve to the right for an arc distance of 120.78 feet (Chord Bearing North 22° 00' 11" West - 93.48 feet), to a 1/2 inch iron rod found;

THENCE, North 54° 20' 11" West, for a distance of 195.10 feet, to a 1/2 inch iron rod found on a curve to the right, having a radius of 275.00 feet, a central angle of 63° 18' 56", and a tangent of 169.56 feet;

THENCE, along said curve to the right for an arc distance of 303.89 feet (Chord Bearing South 44° 01' 47" West - 288.66 feet), to a 1/2 inch iron rod found at the point of tangency;

THENCE, South 75° 41' 15" West, for a distance of 55.01 feet, to a 1/2 inch iron rod found;

THENCE, North 14° 18' 45" West, for a distance of 250.00 feet, to the POINT OF BEGINNING and containing 28.004 acres of land.

LINE TABLE

| LINE NO. | BEARING         | DISTANCE |
|----------|-----------------|----------|
| 1.       | S 35° 39' 49" W | 50.00'   |
| 2.       | N 80° 18' 02" E | 21.08'   |
| 3.       | S 50° 59' 39" E | 58.55'   |

CURVE TABLE

| CURVE NO. | DELTA        | RADIUS   | LENGTH  | TANGENT | CHORD   | BEARING        |
|-----------|--------------|----------|---------|---------|---------|----------------|
| 1.        | 02° 53' 33"  | 275.00'  | 13.88'  | 6.94'   | 13.88'  | N37° 33' 34" E |
| 2.        | 30° 59' 47"  | 920.00'  | 497.71' | 255.11' | 491.66' | N49° 17' 54" W |
| 3.        | 02° 12' 28"  | 800.00'  | 30.83'  | 15.42'  | 30.82'  | S68° 01' 19" E |
| 4.        | 138° 24' 25" | 50.00'   | 120.78' | 131.65' | 93.48'  | N22° 00' 11" W |
| 5.        | 63° 18' 56"  | 275.00'  | 303.89' | 169.56' | 288.66' | S44° 01' 47" W |
| 6.        | 90° 06' 06"  | 250.00'  | 393.14' | 250.44' | 353.87' | N30° 38' 12" E |
| 7.        | 06° 59' 19"  | 5145.00' | 627.56' | 314.17' | 627.18' | N10° 55' 12" W |
| 8.        | 46° 25' 53"  | 250.00'  | 202.59' | 107.23' | 197.10' | N15° 47' 24" E |
| 9.        | 02° 55' 32"  | 4920.0'  | 251.21' | 125.63' | 251.18' | S09° 56' 09" E |
| 10.       | 66° 57' 28"  | 250.00'  | 292.16' | 165.34' | 275.81' | S17° 30' 55" E |
| 11.       | 20° 05' 40"  | 375.00'  | 131.52' | 66.44'  | 130.84' | S26° 00' 38" W |
| 12.       | 21° 14' 39"  | 50.00'   | 18.54'  | 9.38'   | 18.43'  | N57° 49' 21" E |
| 13.       | 16° 54' 44"  | 535.00'  | 157.92' | 79.54'  | 157.34' | N24° 51' 01" E |
| 14.       | 16° 52' 37"  | 695.00'  | 204.72' | 103.11' | 203.98' | N24° 24' 07" E |
| 15.       | 16° 52' 37"  | 315.00'  | 92.79'  | 46.73'  | 92.45'  | N24° 24' 07" E |
| 16.       | 03° 35' 24"  | 695.00'  | 43.55'  | 21.78'  | 43.54'  | S32° 03' 15" W |

SURVEYOR CERTIFICATE

I, WARREN L. CORWIN, do hereby certify that the plat shown hereon accurately represents the results of an on-the-ground survey made under my direction and supervision and all corners are as shown thereon and there are no encroachments, conflicts, protrusions or visible utilities on the ground except as shown and said plat has been prepared in accordance with the plotting rules and regulations of the City Plan Commission of the City of Rockwall, Texas.

DATED the this 30<sup>th</sup> day of August, 2012.

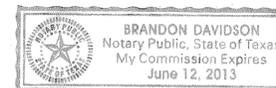
*Warren L. Corwin*  
WARREN L. CORWIN  
R.P.L.S. No. 4621



THE STATE OF TEXAS  
COUNTY OF COLLIN

BEFORE ME, the undersigned, a Notary Public in and for the State of Texas, on this day personally appeared WARREN L. CORWIN, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he executed the same in the capacity therein stated and for the purposes and considerations therein expressed.

WITNESS MY HAND AND SEAL OF OFFICE, this the 30<sup>th</sup> day of August, 2012.



*Brandon Davidson*  
Notary Public in and for the State of Texas

FINAL PLAT  
OF  
**STONE CREEK  
PHASE III**  
OUT OF THE  
W.T. DEWEESE SURVEY, ABSTRACT NO. 71  
S. KING SURVEY, ABSTRACT NO. 131

IN THE  
CITY OF ROCKWALL  
ROCKWALL COUNTY, TEXAS

OWNERS  
STONE CREEK 80/100' POD, LTD.

8214 WESTCHESTER DRIVE, SUITE 710  
DALLAS, TEXAS 75219  
214-522-4945

PREPARED BY  
CORWIN ENGINEERING, INC.

200 W. BELMONT, SUITE E  
ALLEN, TEXAS 75013  
972-396-1200

AUGUST 2012

H269

SHEET 2 OF 3

OWNER'S CERTIFICATE

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

STATE OF TEXAS  
COUNTY OF ROCKWALL

We the undersigned owner(s) of the land shown on this plat, and designated herein as the STONE CREEK PHASE III, subdivision to the City of Rockwall, Texas, and whose name is subscribed hereto, hereby dedicate to the use of the public forever all streets, alleys, parks, water courses, drains, easements and public places thereon shown on the purpose and consideration therein expressed. We further certify that all other parties who have a mortgage or lien interest in the STONE CREEK PHASE III, subdivision have been notified and signed this plat.

We understand and do hereby reserve the easement strips shown on this plat for the purposes stated and for the mutual use and accommodation of all utilities desiring to use or using same. We also understand the following:

1. No buildings shall be constructed or placed upon, over, or across the utility easements as described herein.
2. Any public utility shall have the right to remove and keep removed all or part of any buildings, fences, trees, shrubs, or other growths or improvements which in any way endanger or interfere with construction, maintenance or efficiency of their respective system on any of these easement strips; and any public utility shall at all times have the right of ingress or egress to, from and upon the said easement strips for purpose of construction, reconstruction, inspecting, patrolling, maintaining, and either adding to or removing all or part of their respective system without the necessity of, at any time, procuring the permission of anyone.
3. The City of Rockwall will not be responsible for any claims of any nature resulting from or occasioned by the establishment of grade of streets in the subdivision.
4. The developer and subdivision engineer shall bear total responsibility for storm drain improvements.
5. The developer shall be responsible for the necessary facilities to provide drainage patterns and drainage controls such that properties within the drainage area are not adversely affected by storm drainage from the development.
6. No house dwelling unit, or other structure shall be constructed on any lot in this addition by the owner or any other person until the developer and/or owner has complied with all requirements of the Subdivision Regulations of the City of Rockwall regarding improvements with respect to the entire block on the street or streets on which property abuts, including the actual installation of streets with the required base and paving, curb and gutter, water and sewer, drainage structures, storm structures, storm sewers, and alleys, all according to the specifications of the City of Rockwall; or

Until an escrow deposit, sufficient to pay for the cost of such improvements, as determined by the city's engineer and/or city administrator, computed on a private commercial rate basis, has been made with the city secretary, accompanied by an agreement signed by the developer and/or owner, authorizing the city to make such improvements at prevailing private commercial rates, or have the same made by a contractor and pay for the same out of the escrow deposit, should the developer and/or owner fail or refuse to install the required improvements within the time stated in such written agreement, but in no case shall the City be obligated to make such improvements itself. Such deposit may be used by the owner and/or developer as progress payments as the work progresses in making such improvements by making certified requisitions to the city secretary, supported by evidence of work done; or

Until the developer and/or owner files a corporate surety bond with the city secretary in a sum equal to the cost of such improvements for the designated area, guaranteeing the installation thereof within the time stated in the bond, which time shall be fixed by the city council of the City of Rockwall.

We further acknowledge that the dedications and/or exaction's made herein are proportional to the impact of the Subdivision upon the public services required in order that the development will comport with the present and future growth needs of the City; we, our successors and assigns hereby waive any claim, damage, or cause of action that we may have as a result of the dedication of exactions made herein.

STONE CREEK 80/100's POD, LTD.,  
a Texas limited partnership  
By: STONE CREEK 80/100's POD GP Corporation,  
a Texas corporation

Richard M. Skorburg  
Richard M. Skorburg  
President  
Mortgage or Lien Interest

STATE OF TEXAS  
COUNTY OF DALLAS

Before me, the undersigned authority, on this day personally appeared RICHARD M. SKORBURG, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and consideration therein stated. Given upon my hand and seal of office this 11 day of SEPTEMBER, 2012.

Notary Public in and for the State of Texas My Commission Expires: 7-6-14

STATE OF TEXAS  
COUNTY OF DALLAS

Before me, the undersigned authority, on this day personally appeared \_\_\_\_\_ known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and consideration therein stated. Given upon my hand and seal of office this \_\_\_\_\_ Day of \_\_\_\_\_, 2012.

Notary Public in and for the State of Texas My Commission Expires: \_\_\_\_\_

NOTE: It shall be the policy of the City of Rockwall to withhold issuing building permits until all streets, water, sewer and storm drainage systems have been accepted by the City. The approval of a plat by the City does not constitute any representation, assurance or guarantee that any building within such plat shall be approved, authorized or permit therefore issued, nor shall such approval constitute any representation, assurance or guarantee by the City of the adequacy and availability for water for personal use and fire protection within such plat, as required under Ordinance 83-54.

Recommended for Final Approval:

Planning & Zoning Commission 7/10/2012  
Date

APPROVED

I hereby certify that the above and foregoing plat of an addition to the City of Rockwall, Texas, was approved by the City Council of the City of Rockwall on the 10th day of July, 2012.

This approval shall be invalid unless the approved plat for such addition is recorded in the office of the Court Clerk of Rockwall, County, Texas, within one hundred eighty (180) days from said date of final approval.

WITNESS OUR HANDS, this 10th day of October, 2012.

Paul Sweet Krista Ashberry John Williams  
Mayor, City of Rockwall City Secretary City Engineer



Kathryn E. Bono

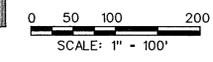
FINAL PLAT  
OF  
**STONE CREEK  
PHASE III**  
OUT OF THE  
W.T. DEWEESE SURVEY, ABSTRACT NO. 71  
S. KING SURVEY, ABSTRACT NO. 131

IN THE  
CITY OF ROCKWALL  
ROCKWALL COUNTY, TEXAS  
OWNERS  
STONE CREEK 80/100' POD, LTD.  
8214 WESTCHESTER DRIVE, SUITE 710  
DALLAS, TEXAS 75219  
214-522-4945

PREPARED BY  
**CORWIN ENGINEERING, INC.**  
200 W. BELMONT, SUITE E  
ALLEN, TEXAS 75013  
972-396-1200  
AUGUST 2012

LEGEND

- PROP. STORM SEWER
- PROP. CURB INLETS
- PROP. CONC. HEADWALL
- EXIST. STORM SEWER
- DRAINAGE AREA DIVIDE
- FLOW ARROW
- DRAINAGE AREA NO.



| Area # | Area (sf) | Area (acres) | Runoff Coefficient | Tc (min) | I (100) (in/hr) | Q (100) (cfs) |
|--------|-----------|--------------|--------------------|----------|-----------------|---------------|
| 1      | 81286     | 1.87         | 0.50               | 10       | 9.8             | 9.1           |
| 2      | 111070    | 2.55         | 0.50               | 10       | 9.8             | 12.5          |
| 3      | 84672     | 1.94         | 0.50               | 10       | 9.8             | 9.5           |
| 4      | 78068     | 1.79         | 0.50               | 10       | 9.8             | 8.8           |
| 5      | 142162    | 3.26         | 0.50               | 10       | 9.8             | 16.0          |
| 6      | 113043    | 2.60         | 0.50               | 10       | 9.8             | 12.7          |
| 7      | 83786     | 1.92         | 0.50               | 10       | 9.8             | 9.4           |
| 8      | 129938    | 2.98         | 0.50               | 10       | 9.8             | 14.6          |
| 9      | 31385     | 0.72         | 0.50               | 10       | 9.8             | 3.5           |
| 10     | 96207     | 2.21         | 0.50               | 10       | 9.8             | 10.8          |
| 11     | 93786     | 2.15         | 0.50               | 10       | 9.8             | 10.5          |
| 12     | 23180     | 0.53         | 0.50               | 10       | 9.8             | 2.6           |
| 14     | 0.00      | 0.00         | 0.50               | 10       | 9.8             | 0.0           |
| 15     | 45585     | 1.05         | 0.50               | 10       | 9.8             | 5.1           |

INLET CALCULATIONS

| Inlet # | Location  | Design Storm Frequency (yrs) | Time of Conc. (min) | Intensity (in/hr) | Runoff Coeff | Area (acres) | Q (cfs) | Carry-Over from Upstream (cfs) | Gutter Capacity (cfs) | Gutter Slope (ft/ft) | Selected inlet Length (ft) | Carry-Over to Downstream Inlet (cfs) |     |
|---------|-----------|------------------------------|---------------------|-------------------|--------------|--------------|---------|--------------------------------|-----------------------|----------------------|----------------------------|--------------------------------------|-----|
| 1       | Amherst   | 12+63                        | 100                 | 10                | 9.8          | 1.94         | 9.5     | 0.0                            | 9.5                   | 0.50%                | 6' pbl                     | 0.0                                  |     |
| 2       | Amherst   | 11+51                        | 100                 | 10                | 9.8          | 2.55         | 12.5    | 0.0                            | 12.5                  | 0.50%                | 6' pbl                     | 0.0                                  |     |
| 3       | Amherst   | 15+76                        | 100                 | 10                | 9.8          | 2.60         | 12.7    | 0.0                            | 12.7                  | 0.50%                | 6' pbl                     | 0.0                                  |     |
| 4       | Amherst   | 21+75                        | 100                 | 10                | 9.8          | 0.50         | 3.5     | 0.0                            | 3.5                   | Low pt               | 10                         | 0.0                                  |     |
| 5       | Amherst   | 21+16                        | 100                 | 10                | 9.8          | 0.50         | 2.21    | 0.0                            | 2.21                  | 3.04%                | 6' pbl                     | 0.0                                  |     |
| 6       | Barrymore | 12+78                        | 100                 | 10                | 9.8          | 0.50         | 1.79    | 0.0                            | 1.79                  | Low pt               | 6' pbl                     | 0.0                                  |     |
| 7       | Barrymore | 12+78                        | 100                 | 10                | 9.8          | 0.50         | 2.98    | 0.0                            | 2.98                  | Low pt               | 6' pbl                     | 0.0                                  |     |
| 8       | Barrymore | 8+75                         | 100                 | 10                | 9.8          | 0.50         | 3.26    | 0.0                            | 3.26                  | 2.73%                | 6' pbl                     | 20                                   | 3.9 |
| 9       | Slip Rd   | 1+09                         | 100                 | 10                | 9.8          | 0.50         | 2.6     | 0.0                            | 2.6                   | 0.65%                | 6' pbl                     | 10                                   | 0.0 |
| 10      | Slip Rd   | 1+09                         | 100                 | 10                | 9.8          | 0.50         | 2.15    | 0.0                            | 2.15                  | 0.65%                | 6' pbl                     | 20                                   | 0.0 |
| 11      | Slip Rd   | 7+62                         | 100                 | 10                | 9.8          | 0.50         | 1.82    | 0.0                            | 1.82                  | 1.49%                | 6' pbl                     | 20                                   | 0.0 |
| 12      | Barrymore | 8+75                         | 100                 | 10                | 9.8          | 0.50         | 1.05    | 0.0                            | 1.05                  | 2.73%                | 6' pbl                     | 20                                   | 0.0 |

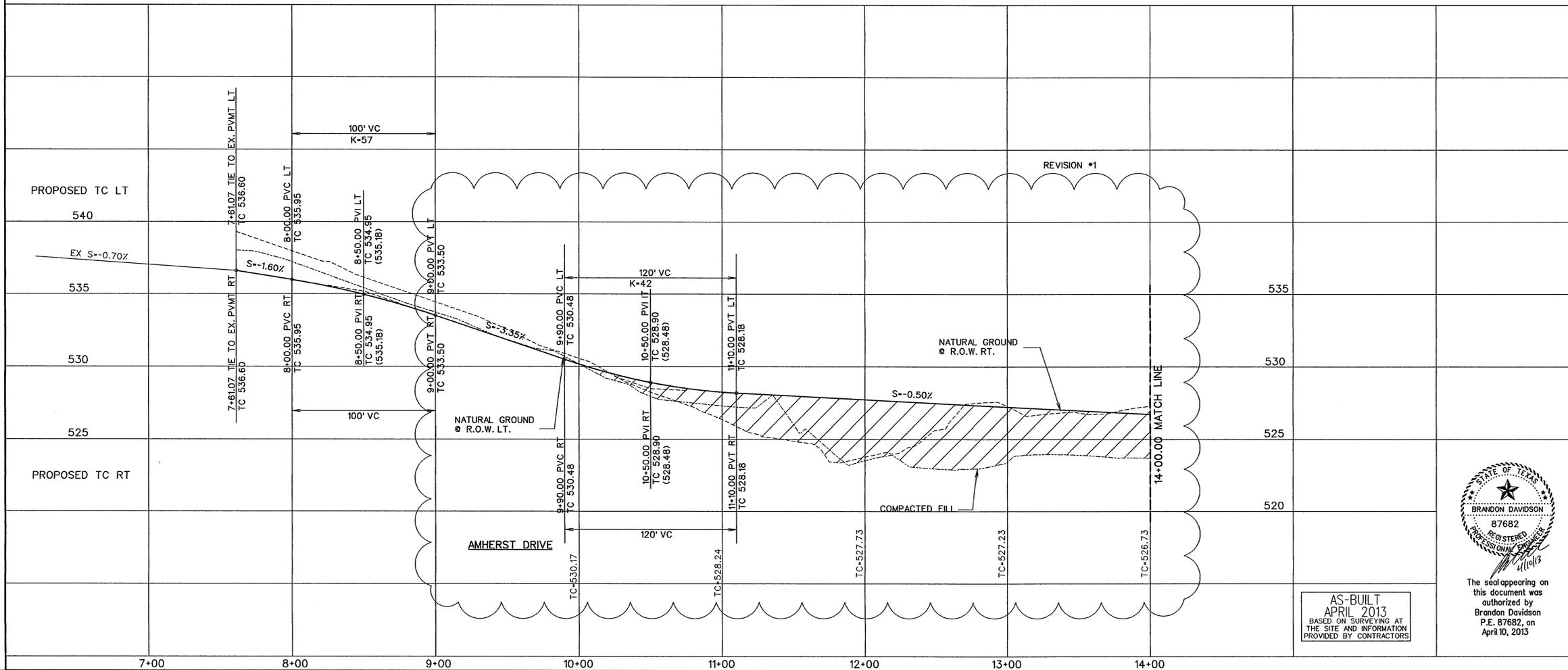
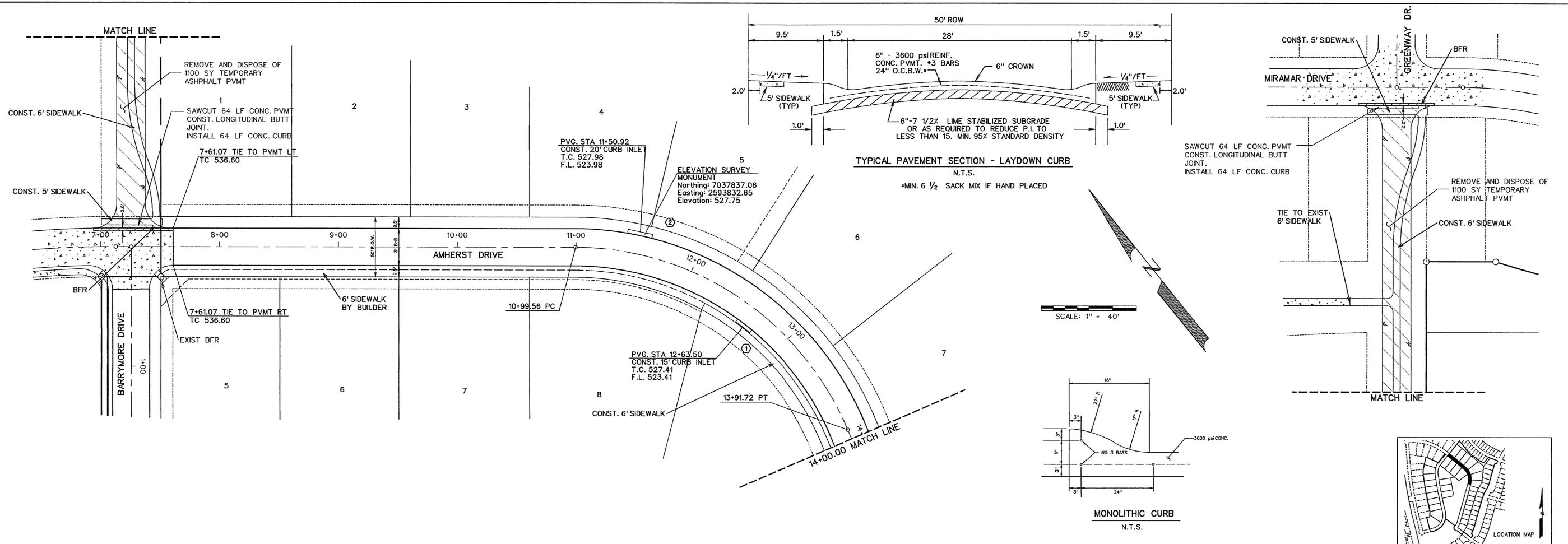
| Upstream Station | Downstream Station | Distance (ft) | AREA NO. | Total Area (Acres) | Picked Up (Acres) | C    | CA    | Accumulated CA | Tc (Min) | Design Storm (Years) | I (in/hr) | Q (CFS) | S (ft/ft) | Pipe Size (in) | Velocity (ft/s) | Head Loss (ft) | Flow Time (Min) | Time at DS (Min) | Δ Velocity Head (ft) | Hydraulic Grade Upstream | Hydraulic Grade Downstream |
|------------------|--------------------|---------------|----------|--------------------|-------------------|------|-------|----------------|----------|----------------------|-----------|---------|-----------|----------------|-----------------|----------------|-----------------|------------------|----------------------|--------------------------|----------------------------|
| LINE D-1         |                    |               |          |                    |                   |      |       |                |          |                      |           |         |           |                |                 |                |                 |                  |                      |                          |                            |
| 5+64.26          | 1+83.83            | 380.43        | Exist    | 28.84              | 28.84             | 0.50 | 14.42 | 14.42          | 10.00    | 100                  | 9.80      | 141.3   | 0.0097    | 48             | 11.2            | 1.95           | 0.57            | 10.57            | 1.95                 | 531.02                   | 529.07                     |
| 1+83.83          | 1+28.91            | 34.92         | 2        | 2.55               | 2.55              | 0.50 | 1.28  | 15.70          | 10.57    | 100                  | 9.71      | 152.5   | 0.0060    | 54             | 9.6             | 1.43           | 0.10            | 10.67            | -0.26                | 525.38                   | 525.64                     |
| 1+28.91          | 0+87.85            | 41.06         | D-2      | 5.03               | 5.03              | 0.50 | 2.52  | 18.22          | 10.67    | 100                  | 9.69      | 176.6   | 0.0081    | 54             | 11.1            | 1.91           | 0.06            | 10.73            | 0.48                 | 525.31                   | 524.83                     |
| 0+87.85          | 0+00.00            | 87.85         | 3        | 1.94               | 1.94              | 0.50 | 0.97  | 19.19          | 10.73    | 100                  | 9.68      | 185.8   | 0.0089    | 54             | 11.7            | 2.13           | 0.13            | 10.86            | 0.22                 | 524.50                   | 524.28                     |
| 0+00.00          | 0+00.00            | 0.00          | 0        | 0.00               | 0.00              | 0.50 | 0.00  | 19.19          | 10.86    | 100                  | 9.66      | 185.4   | 0.0089    | 54             | 11.7            | 2.13           | 0.00            | 10.86            | 0.00                 | 523.50                   | 523.50                     |
| LINE D-2         |                    |               |          |                    |                   |      |       |                |          |                      |           |         |           |                |                 |                |                 |                  |                      |                          |                            |
| 3+39.12          | 3+32.63            | 6.49          | Exist    | 3.16               | 3.16              | 0.50 | 1.58  | 1.58           | 10.00    | 100                  | 9.80      | 15.5    | 0.0095    | 21             | 6.4             | 0.64           | 0.02            | 10.02            | 0.64                 | 533.49                   | 532.85                     |
| 3+32.63          | 3+27.33            | 5.30          | 1        | 1.87               | 1.87              | 0.50 | 0.94  | 2.52           | 10.02    | 100                  | 9.80      | 24.7    | 0.0119    | 24             | 7.9             | 0.97           | 0.01            | 10.03            | 0.33                 | 532.79                   | 532.46                     |
| 3+27.33          | 2+55.44            | 71.89         | 0        | 0.00               | 0.00              | 0.50 | 0.00  | 2.52           | 10.03    | 100                  | 9.80      | 24.7    | 0.0119    | 24             | 7.9             | 0.97           | 0.15            | 10.18            | 0.00                 | 532.40                   | 532.40                     |
| 2+55.44          | 0+00.00            | 255.44        | 0        | 0.00               | 0.00              | 0.50 | 0.00  | 2.52           | 10.18    | 100                  | 9.77      | 24.6    | 0.0118    | 24             | 7.8             | 0.94           | 0.55            | 10.73            | -0.02                | 531.54                   | 528.83                     |
| 0+00.00          | 0+00.00            | 0.00          | 0        | 0.00               | 0.00              | 0.50 | 0.00  | 2.52           | 10.73    | 100                  | 9.68      | 24.4    | 0.0116    | 24             | 11.1            | 1.91           | 0.00            | 10.73            | 0.97                 | 525.80                   | 524.83                     |
| LINE D-3         |                    |               |          |                    |                   |      |       |                |          |                      |           |         |           |                |                 |                |                 |                  |                      |                          |                            |
| 3+60.99          | 2+33.58            | 127.01        | Exist    | 11.28              | 11.28             | 0.50 | 5.64  | 5.64           | 10.00    | 100                  | 9.80      | 55.3    | 0.0182    | 30             | 11.3            | 1.98           | 0.19            | 10.19            | 1.98                 | 505.99                   | 505.01                     |
| 2+33.58          | 2+04.52            | 29.06         | 10       | 2.21               | 2.21              | 0.50 | 1.11  | 6.75           | 10.19    | 100                  | 9.77      | 66.0    | 0.0098    | 36             | 9.3             | 1.34           | 0.05            | 10.24            | -0.32                | 502.70                   | 503.02                     |
| 2+04.52          | 1+15.00            | 89.52         | 9        | 0.72               | 0.72              | 0.50 | 0.36  | 7.11           | 10.24    | 100                  | 9.76      | 69.4    | 0.0108    | 36             | 9.8             | 1.49           | 0.15            | 10.39            | 0.15                 | 502.74                   | 502.59                     |
| 1+15.00          | 1+15.00            | 0.00          | 0        | 0.00               | 0.00              | 0.50 | 0.00  | 7.11           | 10.39    | 100                  | 9.74      | 69.3    | 0.0108    | 36             | 9.8             | 1.49           | 0.00            | 10.39            | 0.00                 | 501.62                   | 501.62                     |
| LINE D-4         |                    |               |          |                    |                   |      |       |                |          |                      |           |         |           |                |                 |                |                 |                  |                      |                          |                            |
| 2+12.71          | 1+75.88            | 36.83         | 8        | 2.98               | 2.98              | 0.50 | 1.49  | 1.49           | 10.00    | 100                  | 9.80      | 14.6    | 0.0085    | 21             | 6.1             | 0.58           | 0.10            | 10.10            | 0.58                 | 504.83                   | 504.25                     |
| 1+75.88          | 1+10.00            | 65.88         | 4        | 1.79               | 1.79              | 0.50 | 0.90  | 2.39           | 10.10    | 100                  | 9.78      | 23.4    | 0.0218    | 21             | 9.7             | 1.46           | 0.11            | 10.21            | 0.88                 | 503.93                   | 503.05                     |
| 1+10.00          | 1+10.00            | 0.00          | 0        | 0.00               | 0.00              | 0.50 | 0.00  | 2.39           | 10.21    | 100                  | 9.77      | 23.4    | 0.0217    | 21             | 9.7             | 1.46           | 0.00            | 10.21            | 0.00                 | 501.62                   | 501.62                     |
| LINE D-5         |                    |               |          |                    |                   |      |       |                |          |                      |           |         |           |                |                 |                |                 |                  |                      |                          |                            |
| 1+23.77          | 0+38.00            | 85.77         | 6        | 2.60               | 2.60              | 0.50 | 1.30  | 1.30           | 10.00    | 100                  | 9.80      | 12.7    | 0.0147    | 18             | 7.2             | 0.80           | 0.20            | 10.20            | 0.80                 | 523.56                   | 521.76                     |
| 0+38.00          | 0+38.00            | 0.00          | 0        | 0.00               | 0.00              | 0.50 | 0.00  | 1.30           | 10.20    | 100                  | 9.77      | 12.7    | 0.0146    | 18             | 7.2             | 0.80           | 0.00            | 10.20            | 0.00                 | 520.50                   | 520.50                     |
| LINE D-6         |                    |               |          |                    |                   |      |       |                |          |                      |           |         |           |                |                 |                |                 |                  |                      |                          |                            |
| 4+41.27          | 2+30.32            | 210.95        | 5        | 3.26               | 2.45              | 0.50 | 1.23  | 1.23           | 10.00    | 100                  | 9.80      | 12.1    | 0.0132    | 18             | 6.8             | 0.72           | 0.52            | 10.52            | 0.72                 | 514.93                   | 514.21                     |
| 2+30.32          | 0+00.00            | 230.32        | 15       | 1.05               | 1.87              | 0.50 | 0.94  | 2.17           | 10.52    | 100                  | 9.72      | 21.1    | 0.0177    | 21             | 8.8             | 1.20           | 0.44            | 10.56            | 0.44                 | 511.43                   | 510.95                     |
| 0+00.00          | 0+00.00            | 0.00          | 0        | 0.00               | 0.00              | 0.50 | 0.00  | 2.17           | 10.96    | 100                  | 9.65      | 20.9    | 0.0175    | 21             | 8.7             | 1.18           | 0.00            | 10.96            | -0.01                | 506.87                   | 506.88                     |
| LINE D-7         |                    |               |          |                    |                   |      |       |                |          |                      |           |         |           |                |                 |                |                 |                  |                      |                          |                            |
| 0+86.21          | 0+63.49            | 22.72         | 11       | 2.15               | 2.15              | 0.50 | 1.07  | 1.07           | 10.00    | 100                  | 9.80      | 10.5    | 0.0100    | 18             | 5.9             | 0.54           | 0.06            | 10.06            | 0.54                 | 524.83                   | 524.29                     |
| 0+63.49          | 0+00.00            | 63.49         | 13       | 0.53               | 0.53              | 0.50 | 0.27  | 1.34           | 10.06    | 100                  | 9.79      | 13.1    | 0.0156    | 18             | 7.4             | 0.85           | 0.14            | 10.20            | 0.31                 | 524.06                   | 523.75                     |
| 0+00.00          | 0+00.00            | 0.00          | 0        | 0.00               | 0.00              | 0.50 | 0.00  | 1.34           | 10.20    | 100                  | 9.77      | 13.1    | 0.0155    | 18             | 7.4             | 0.85           | 0.00            | 10.20            | 0.00                 | 522.76                   | 522.76                     |
| LINE D-8         |                    |               |          |                    |                   |      |       |                |          |                      |           |         |           |                |                 |                |                 |                  |                      |                          |                            |
| 0+86.65          | 0+00.00            | 86.65         | 7        | 1.92               | 1.92              | 0.50 | 0.96  | 0.96           | 10.00    | 100                  | 9.80      | 9.4     | 0.0080    | 18             | 5.3             | 0.44           | 0.27            | 10.27            | 0.44                 | 523.00                   | 521.56                     |
| 0+00.00          | 0+00.00            | 0.00          | 0        | 0.00               | 0.00              | 0.50 | 0.00  | 0.96           | 10.27    | 100                  | 9.76      | 9.4     | 0.0080    | 18             | 5.3             | 0.44           | 0.00            | 10.27            | 0.00                 | 520.86                   | 520.86                     |



AS-BUILT  
APRIL 2013  
BASED ON SURVEYING AT  
THE SITE AND INFORMATION  
PROVIDED BY CONTRACTORS

The seal appearing on  
this document was  
authorized by  
Brandon Davidson  
P.E. 87682, on  
April 10, 2013

|  |                |            |           |
|--|----------------|------------|-----------|
| 1  | REVISED CHARTS | DS         | 9-17-12   |
| NO.  | REVISIONS      | BY         | DATE      |
| <p><b>CORVIN ENGINEERING, INC.</b><br/>200 W. BELMONT, SUITE E<br/>ALLEN, TEXAS 75013 (972)396-1200<br/>TBE FIRM #5951</p> |                |            |           |
| <p>DEVELOPMENT PLANS FOR<br/><b>STONE CREEK PHASE III</b><br/>ROCKWALL, TEXAS</p>  |                |            |           |
| <p>DRAINAGE AREA MAP</p>   |                |            |           |
| DRAWN BY   | DESIGNED BY    | CHECKED BY | SHEET NO. |
| DS   | DS             | WC         |           |
| JOB NUMBER   | DATE           | SCALE      |           |
| 11056  | AUGUST 2012    | 1"=100'    | 3 OF 18   |



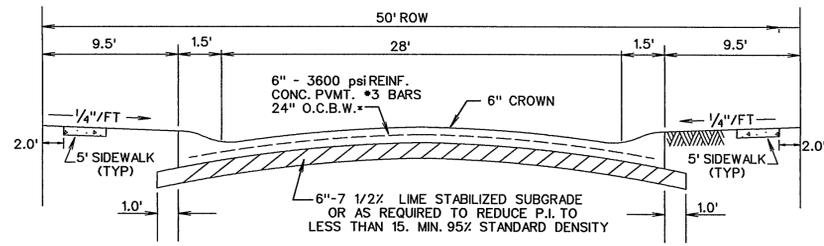
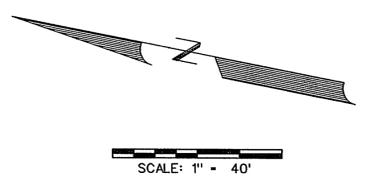
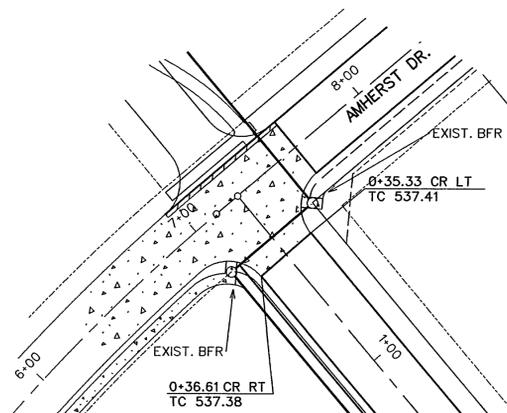
|   |                     |            |           |
|---|---------------------|------------|-----------|
| 1.  | RAISED AMHERST ROAD | DS         | 9-17-12   |
| NO.   | REVISIONS           | BY         | DATE      |
| <p><b>CORWIN ENGINEERING, INC.</b><br/>200 W. BELMONT, SUITE E<br/>ALLEN, TEXAS 75013 (972)396-1200<br/>TBPE FIRM #5951</p> |                     |            |           |
| <p>DEVELOPMENT PLANS FOR<br/><b>STONE CREEK PHASE III</b><br/>ROCKWALL, TEXAS</p>   |                     |            |           |
| <p>AMHERST DRIVE</p>  |                     |            |           |
| DRAWN BY  | DESIGNED BY         | CHECKED BY | SHEET NO. |
| DS  | DS                  | WC         | 4 of 18   |
| JOB NUMBER  | DATE                | SCALE:     |           |
| 11056   | AUGUST 2012         | 1"=40'     |           |



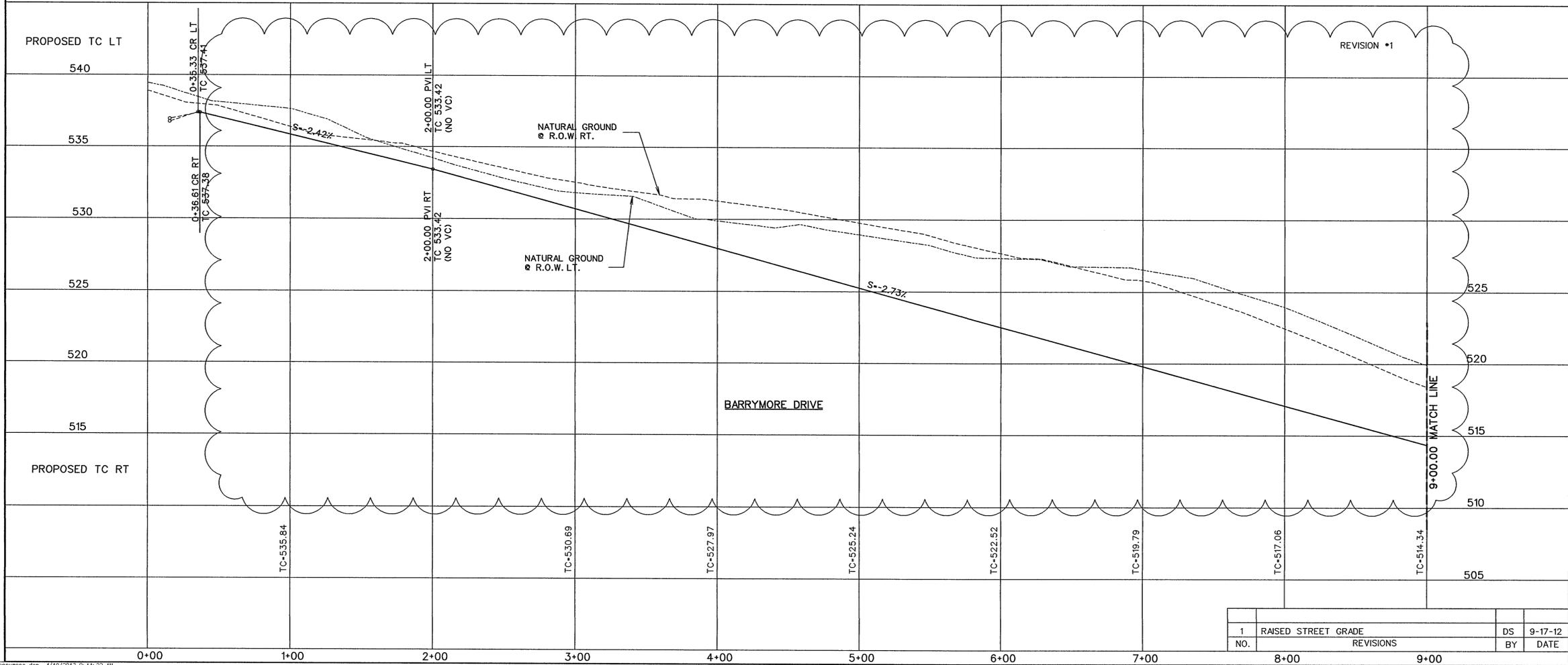
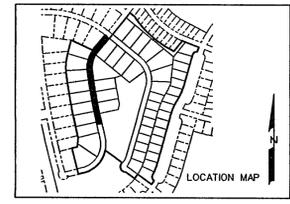
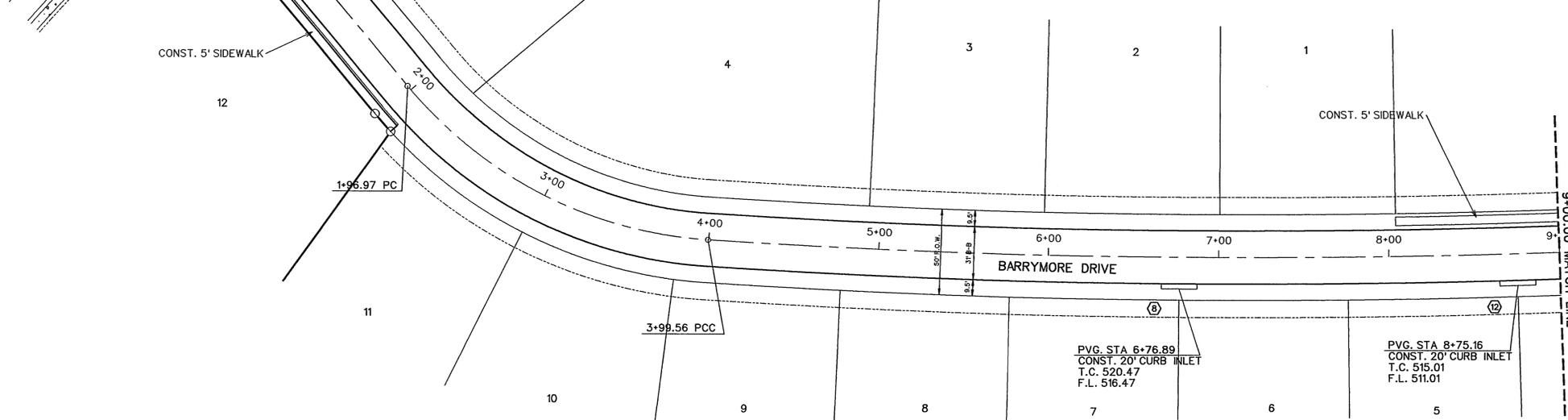
The seal appearing on this document was authorized by  
Brandon Davidson  
P.E. 87682, on  
April 10, 2013

AS-BUILT  
APRIL 2013  
BASED ON SURVEYING AT  
THE SITE AND INFORMATION  
PROVIDED BY CONTRACTORS





**TYPICAL PAVEMENT SECTION - LAYDOWN CURB**  
N.T.S.  
\*MIN. 6 1/2 SACK MIX IF HAND PLACED



REVISION #1



AS-BUILT  
APRIL 2013  
BASED ON SURVEYING AT  
THE SITE AND INFORMATION  
PROVIDED BY CONTRACTORS

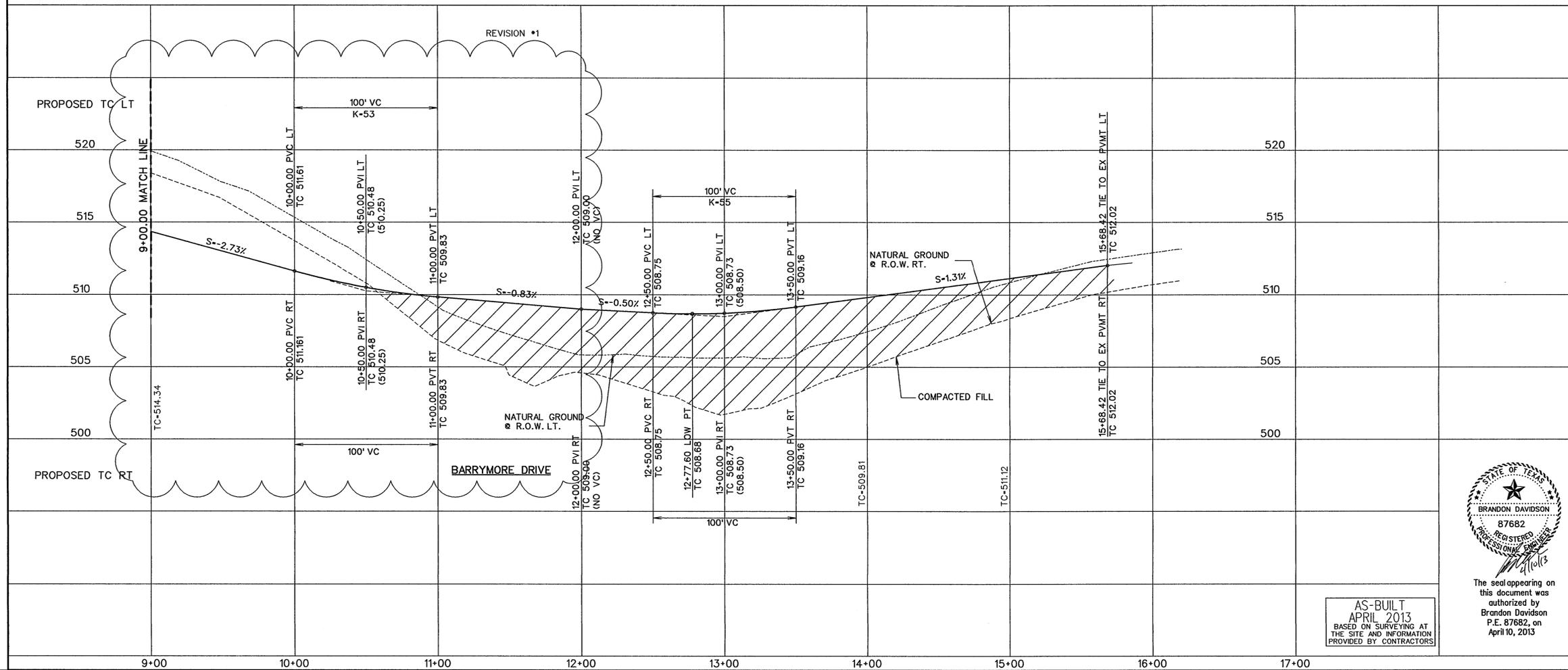
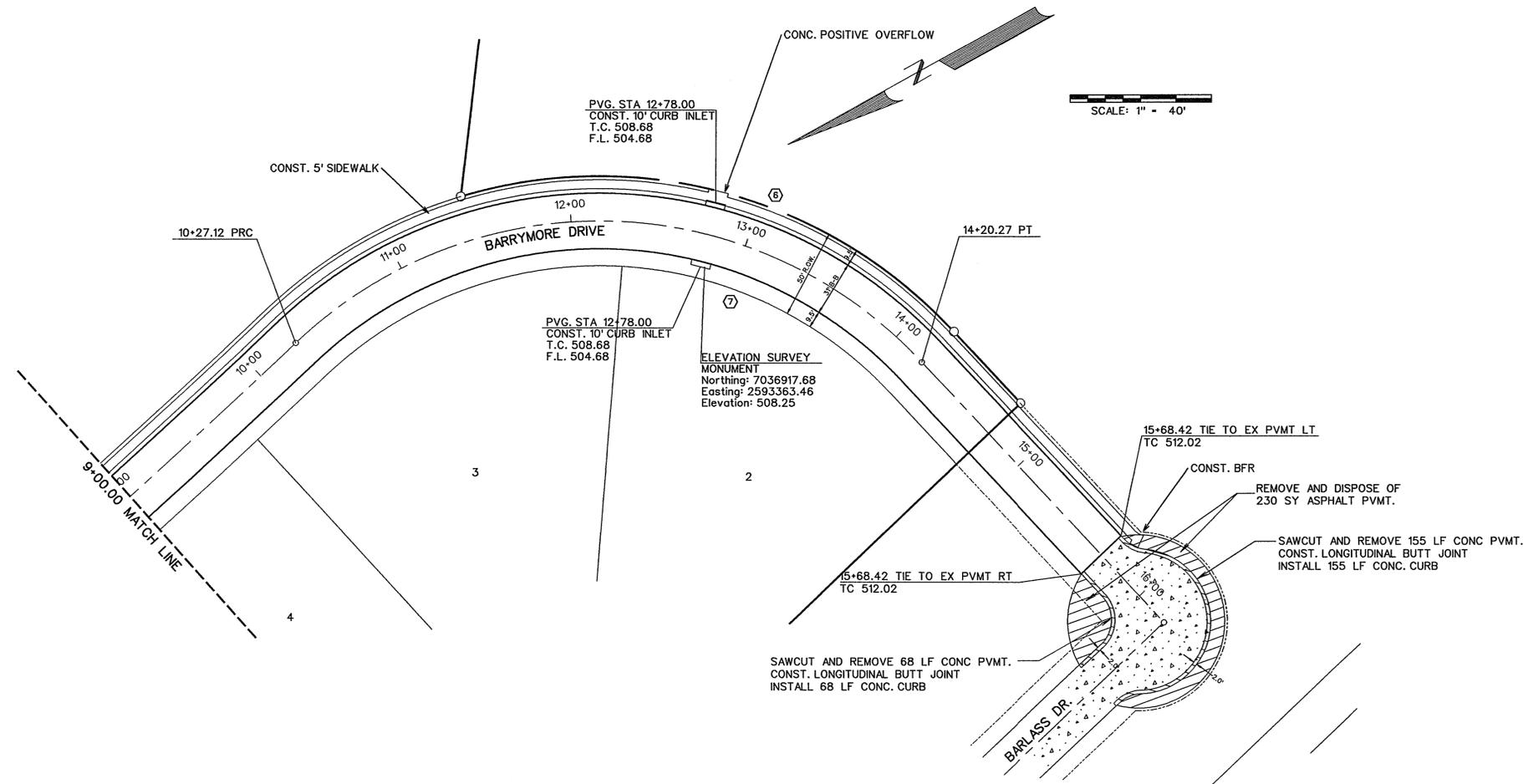
The seal appearing on  
this document was  
authorized by  
Brandon Davidson  
P.E. 87682, on  
April 10, 2013

**CORWIN ENGINEERING, INC.**  
200 W. BELMONT, SUITE E  
ALLEN, TEXAS 75013 (972)396-1200  
TBPE FIRM #5951

DEVELOPMENT PLANS FOR  
**STONE CREEK PHASE III**  
ROCKWALL, TEXAS

BARRYMORE DRIVE

|     |                     |    |         |                     |                     |                  |                      |
|-----|---------------------|----|---------|---------------------|---------------------|------------------|----------------------|
| 1   | RAISED STREET GRADE | DS | 9-17-12 | DRAWN BY<br>DS      | DESIGNED BY<br>DS   | CHECKED BY<br>WC | SHEET NO.<br>6 OF 18 |
| NO. | REVISIONS           | BY | DATE    |                     |                     |                  |                      |
|     |                     |    |         | JOB NUMBER<br>11056 | DATE<br>AUGUST 2012 | SCALE:<br>1"=40' |                      |



|     |                     |    |         |
|-----|---------------------|----|---------|
| 1   | RAISED STREET GRADE | DS | 9-17-12 |
| NO. | REVISIONS           | BY | DATE    |



The seal appearing on this document was authorized by Brandon Davidson P.E. 87682, on April 10, 2013

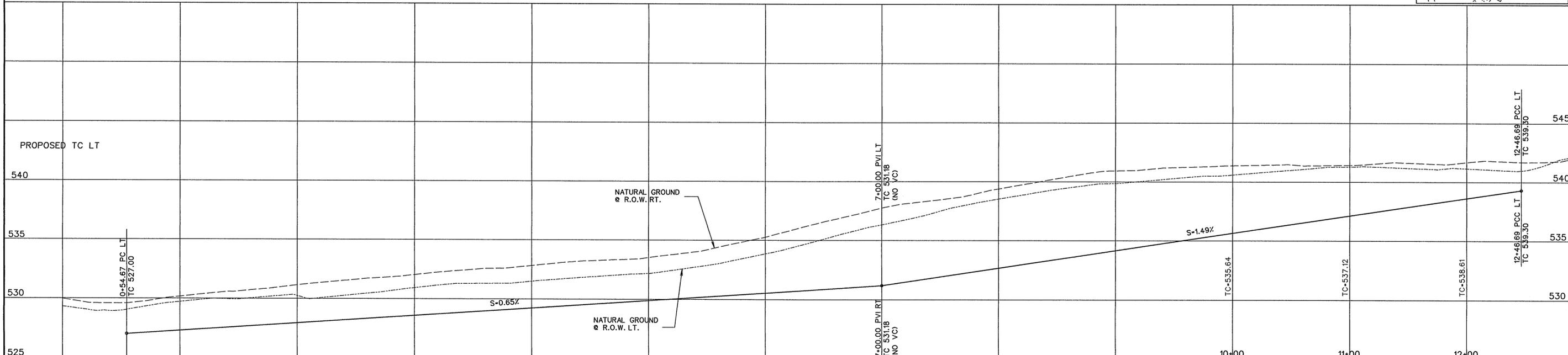
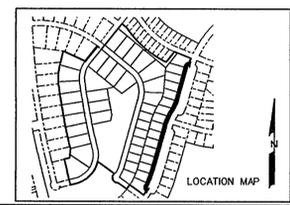
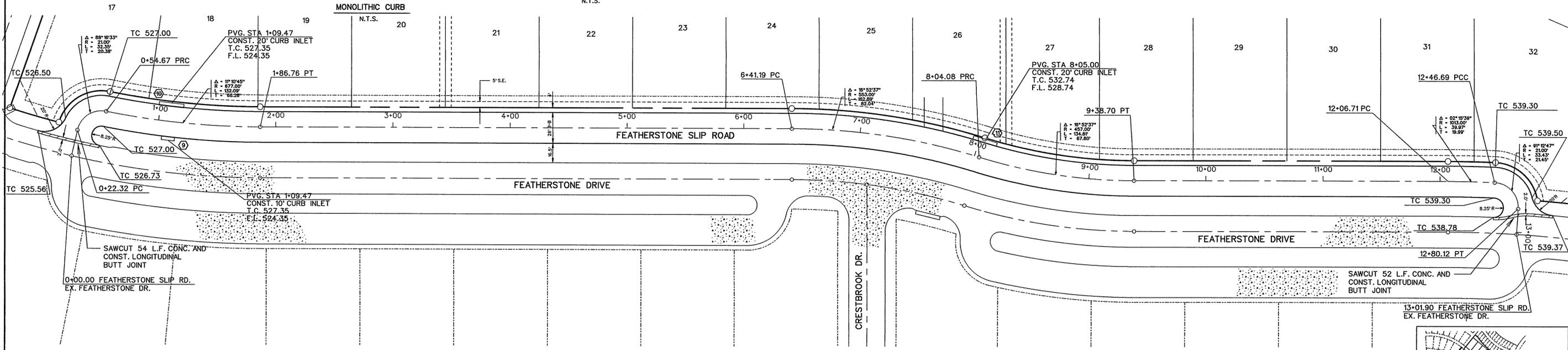
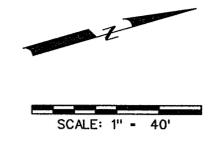
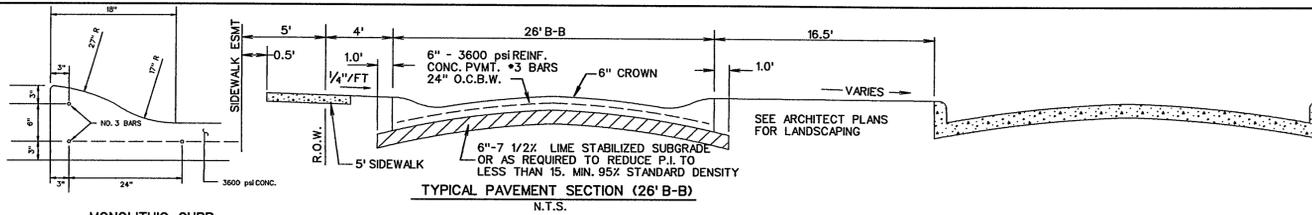
AS-BUILT  
APRIL 2013  
BASED ON SURVEYING AT THE SITE AND INFORMATION PROVIDED BY CONTRACTORS

**CORWIN ENGINEERING, INC.**  
200 W. BELMONT, SUITE E  
ALLEN, TEXAS 75013 (972)396-1200  
TBPE FIRM #5951

DEVELOPMENT PLANS FOR  
**STONE CREEK PHASE III**  
ROCKWALL, TEXAS

BARRYMORE DRIVE

|                     |                     |                  |                      |
|---------------------|---------------------|------------------|----------------------|
| DRAWN BY<br>DS      | DESIGNED BY<br>DS   | CHECKED BY<br>WC | SHEET NO.<br>7 OF 18 |
| JOB NUMBER<br>11056 | DATE<br>AUGUST 2012 | SCALE:<br>1"=40' |                      |



|           |           |           |           |           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 0+00      | 1+00      | 2+00      | 3+00      | 4+00      | 5+00      | 6+00      | 7+00      | 8+00      | 9+00      |
| TC-525.56 | TC-527.00 | TC-527.29 | TC-527.94 | TC-528.59 | TC-529.24 | TC-529.88 | TC-530.53 | TC-532.66 | TC-534.15 |

**CORWIN ENGINEERING, INC.**  
 200 W. BELMONT, SUITE E  
 ALLEN, TEXAS 75013 (972)396-1200  
 TBPE FIRM #5951

**DEVELOPMENT PLANS FOR  
 STONE CREEK PHASE III  
 ROCKWALL, TEXAS**

FEATHERSTONE SLIP ROAD

|                     |                     |                  |                      |
|---------------------|---------------------|------------------|----------------------|
| DRAWN BY<br>DS      | DESIGNED BY<br>DS   | CHECKED BY<br>WC | SHEET NO.<br>8 OF 18 |
| JOB NUMBER<br>11056 | DATE<br>AUGUST 2012 | SCALE:<br>1"=40' |                      |

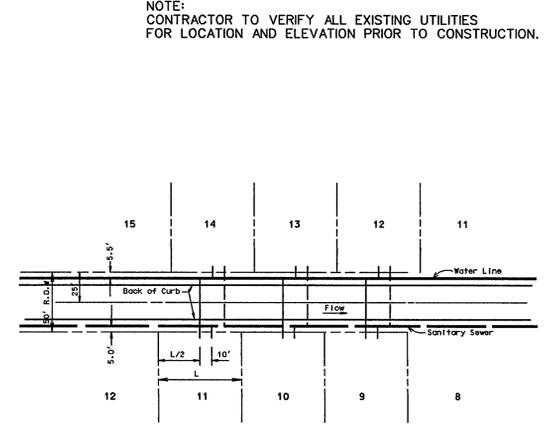
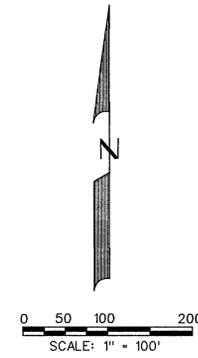


The seal appearing on this document was authorized by Brandon Davidson P.E. 87682, on April 10, 2013

AS-BUILT  
 APRIL 2013  
 BASED ON SURVEYING AT THE SITE AND INFORMATION PROVIDED BY CONTRACTORS

| SERVICE SCHEDULE |      |     |
|------------------|------|-----|
| TYPE             | SIZE | NO. |
| SANITARY         | 4"   | 34  |
| WATER            | 1"   | 34  |

NOTE:  
SERVICES TO LOTS 17-32 BLOCK A WERE INSTALLED WITH PHASE I CONSTRUCTION. CONTRACTOR TO VERIFY AND REPAIR IF NECESSARY.



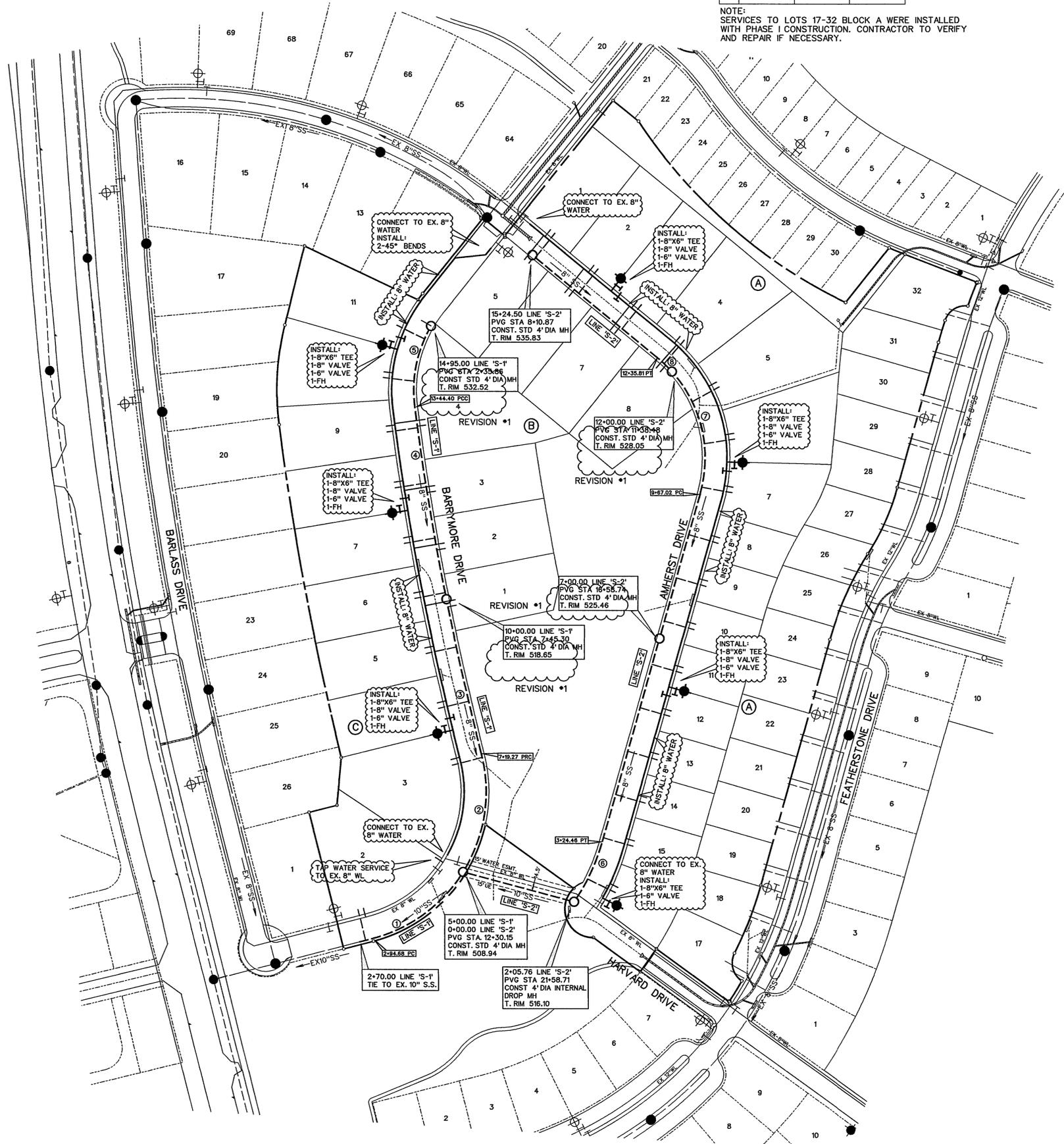
CURVE TABLE

| CURVE NO. | DELTA     | RADIUS  | LENGTH  | TANGENT |
|-----------|-----------|---------|---------|---------|
| 1.        | 43°34'15" | 270.00' | 205.32' | 107.91' |
| 2.        | 46°31'51" | 270.00' | 219.27' | 116.09' |
| 3.        | 02°01'14" | 5125.0' | 180.73' | 90.37'  |
| 4.        | 04°58'06" | 5125.0' | 444.40' | 222.34' |
| 5.        | 37°31'02" | 230.00' | 150.60' | 76.11'  |
| 6.        | 19°09'32" | 355.00' | 118.71' | 59.91'  |
| 7.        | 58°02'16" | 230.00' | 232.98' | 127.59' |
| 8.        | 08°55'11" | 230.00' | 35.81'  | 17.94'  |

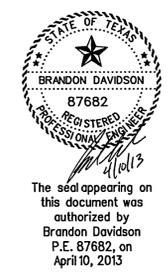
NOTE:  
ALL WATER LINES TO BE CLASS 200 PIPE SDR 14.  
ALL SANITARY SEWER PIPE TO BE SDR 35 FOR 5'-10" DEEP AND SDR 26 FOR 10" AND GREATER. 10" SANITARY SEWER TO BE SDR 26.  
INSTALL BLUE "EMS" DISK ON WATER LINE AT EVERY CHANGE IN DIRECTION, VALVE, AND SERVICE.  
INSTALL GREEN "EMS" DISK ON SANITARY SEWER LINE AT EVERY CHANGE IN DIRECTION, MANHOLE, CLEANOUT, AND SERVICE.  
ALL MANHOLES TO BE RAVEN EPOXY LINED (OR APPROVED EQUAL) AND SEALED IF LOCATED IN STREET PAVEMENT.

LEGEND

|  |                               |
|--|-------------------------------|
|  | PROP. WATER LINE              |
|  | PROP. FIRE HYDRANT AND VALVE  |
|  | PROP. GATE VALVE              |
|  | PROP. FLUSH VALVE             |
|  | EXIST. WATER LINE             |
|  | EXIST. FIRE HYDRANT AND VALVE |
|  | PROP. SANITARY SEWER          |
|  | PROP. MANHOLE                 |
|  | PROP. CLEANOUT                |
|  | EXIST. SANITARY SEWER         |
|  | EXIST. MANHOLE                |
|  | PROP. STORM SEWER             |
|  | PROP. CURB INLETS             |
|  | PROP. CONC. HEADWALL          |

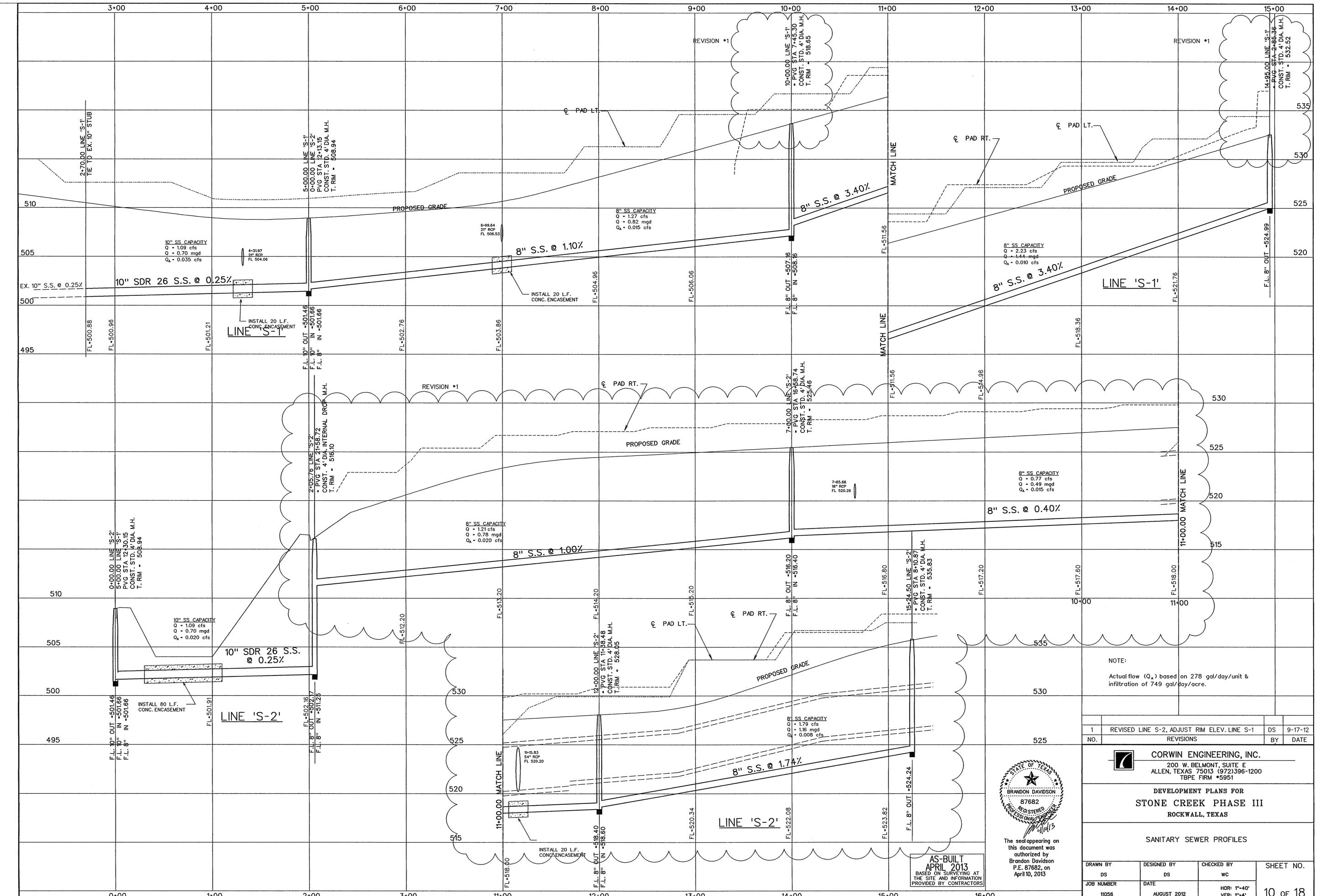


AS-BUILT  
APRIL 2013  
BASED ON SURVEYING AT THE SITE AND INFORMATION PROVIDED BY CONTRACTORS



The seal appearing on this document was authorized by  
Brandon Davidson  
P.E. 87682, on  
April 10, 2013

|   |  |            |           |
|---|--|------------|-----------|
| 1   | REVISED TOP OF RIM ELEV LINE S-1 & S-2 | DS         | 9-17-12   |
| NO.   | REVISIONS                              | BY         | DATE      |
| <br><b>CORWIN ENGINEERING, INC.</b><br>200 W. BELMONT, SUITE E<br>ALLEN, TEXAS 75013 (972)396-1200<br>TBPE FIRM #5951 |  |            |           |
| DEVELOPMENT PLANS FOR<br><b>STONE CREEK PHASE III</b><br>ROCKWALL, TEXAS  |  |            |           |
| WATER AND SANITARY SEWER PLAN   |  |            |           |
| DRAWN BY  | DESIGNED BY                            | CHECKED BY | SHEET NO. |
| DS  | DS                                     | WC         | 9 of 18   |
| JOB NUMBER  | DATE                                   | SCALE:     |           |
| 11056   | AUGUST 2012                            | 1"=100'    |           |



NOTE:  
Actual flow (Q<sub>a</sub>) based on 278 gal/day/unit & infiltration of 749 gal/day/acre.

| NO. | REVISIONS                                   | BY | DATE    |
|-----|---|----|---------|
| 1   | REVISED LINE S-2, ADJUST RIM ELEV. LINE S-1 | DS | 9-17-12 |



The seal appearing on this document was authorized by  
Brandon Davidson  
P.E. 87682, on  
April 10, 2013

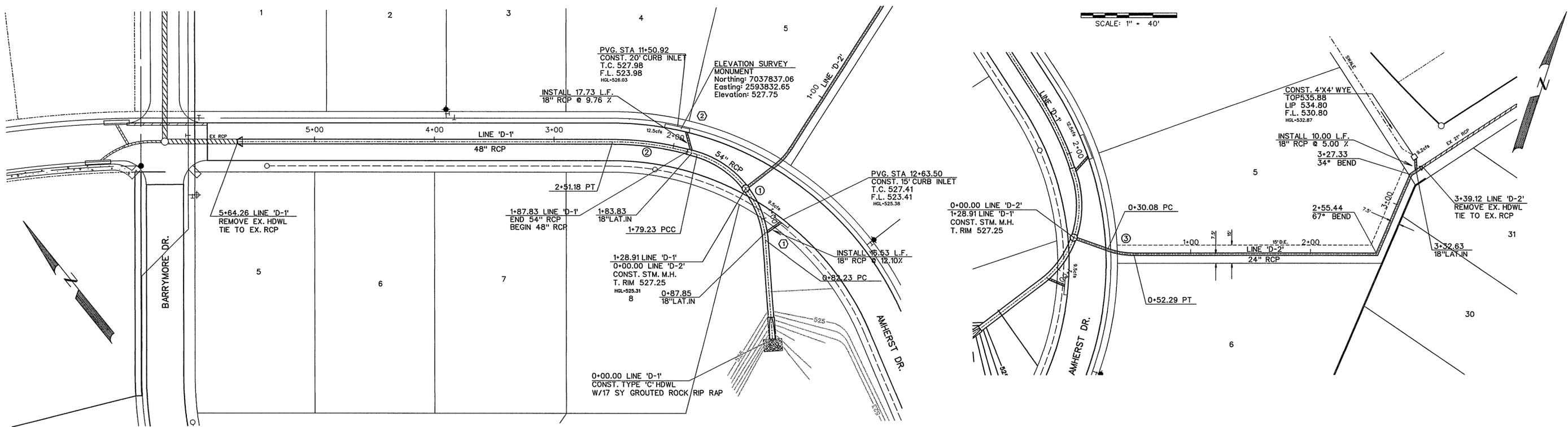
AS-BUILT  
APRIL 2013  
BASED ON SURVEYING AT  
THE SITE AND INFORMATION  
PROVIDED BY CONTRACTORS

**CORVIN ENGINEERING, INC.**  
200 W. BELMONT, SUITE E  
ALLEN, TEXAS 75013 (972)396-1200  
TBPE FIRM #5951

DEVELOPMENT PLANS FOR  
**STONE CREEK PHASE III**  
ROCKWALL, TEXAS

SANITARY SEWER PROFILES

| DRAWN BY            | DESIGNED BY         | CHECKED BY                | SHEET NO. |
|---------------------|---------------------|---------------------------|-----------|
| DS                  | DS                  | WC                        | 10 OF 18  |
| JOB NUMBER<br>11056 | DATE<br>AUGUST 2012 | HOR: 1"=40'<br>VER: 1"=4' |           |



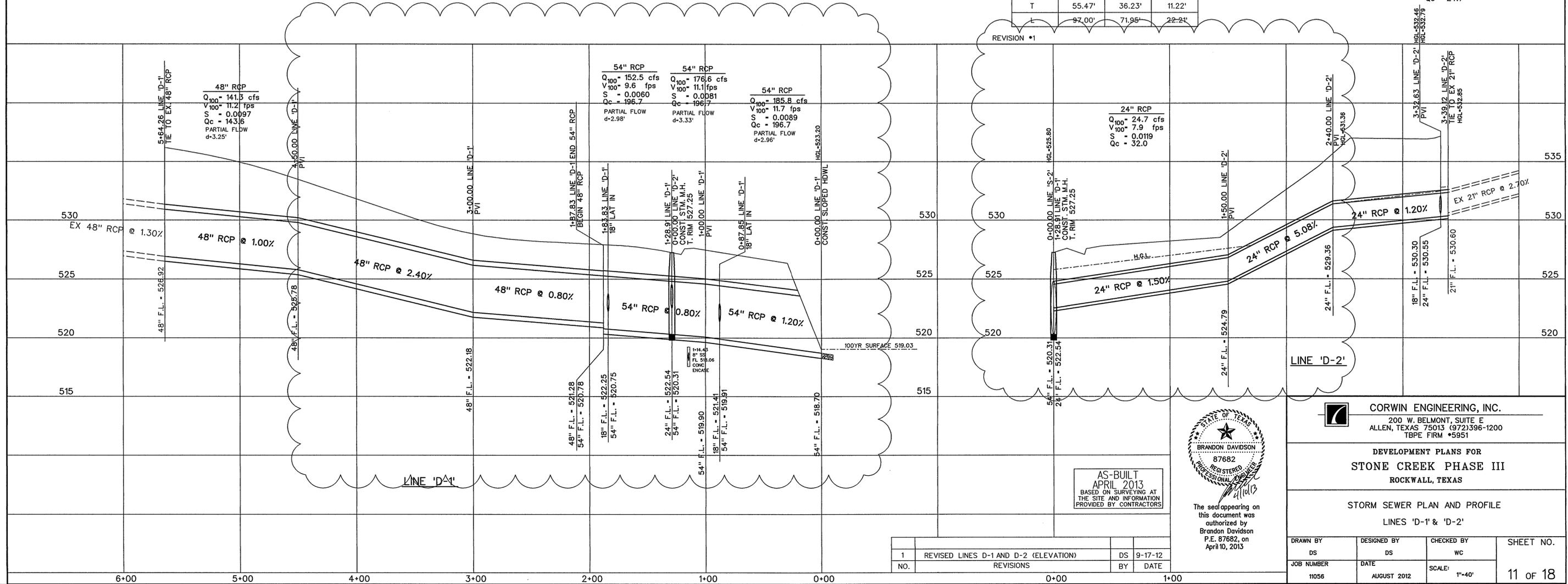
SCALE: 1" = 40'

| CURVE DATA |             |             |             |
|------------|-------------|-------------|-------------|
| CURVE NO.  | ①           | ②           | ③           |
| Δ          | 69° 28' 11" | 16° 29' 23" | 19° 35' 06" |
| R          | 80.00'      | 250.00'     | 65.00'      |
| T          | 55.47'      | 36.23'      | 11.22'      |
| L          | 97.00'      | 71.95'      | 22.21'      |

24" RCP  
 $Q_{100} = 15.5$  cfs  
 $V_{100} = 6.4$  fps  
 $S = 0.0095$   
 $Q_c = 24.7$

REVISION #1

REVISION #1



AS-BUILT  
 APRIL 2013  
 BASED ON SURVEYING AT  
 THE SITE AND INFORMATION  
 PROVIDED BY CONTRACTORS



The seal appearing on this document was authorized by Brandon Davidson P.E. 87682, on April 10, 2013

**CORWIN ENGINEERING, INC.**  
 200 W. BELMONT, SUITE E  
 ALLEN, TEXAS 75013 (972)396-1200  
 TBPE FIRM #5951

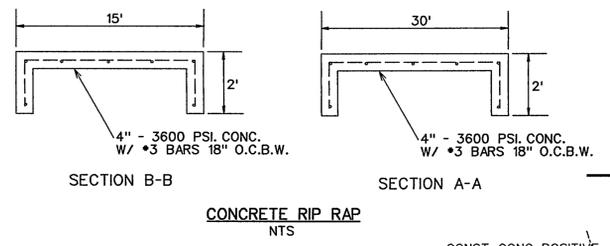
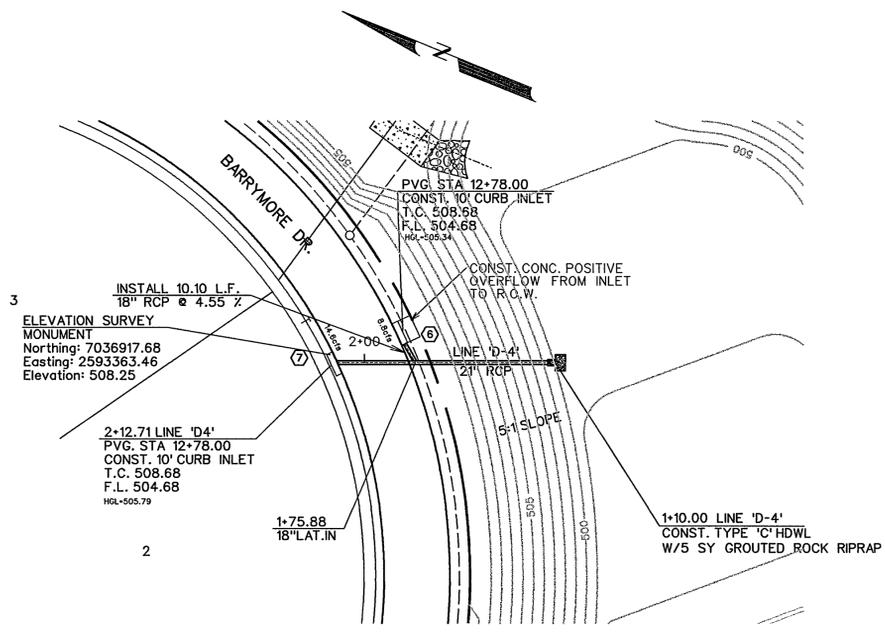
DEVELOPMENT PLANS FOR  
**STONE CREEK PHASE III**  
 ROCKWALL, TEXAS

STORM SEWER PLAN AND PROFILE  
 LINES 'D-1' & 'D-2'

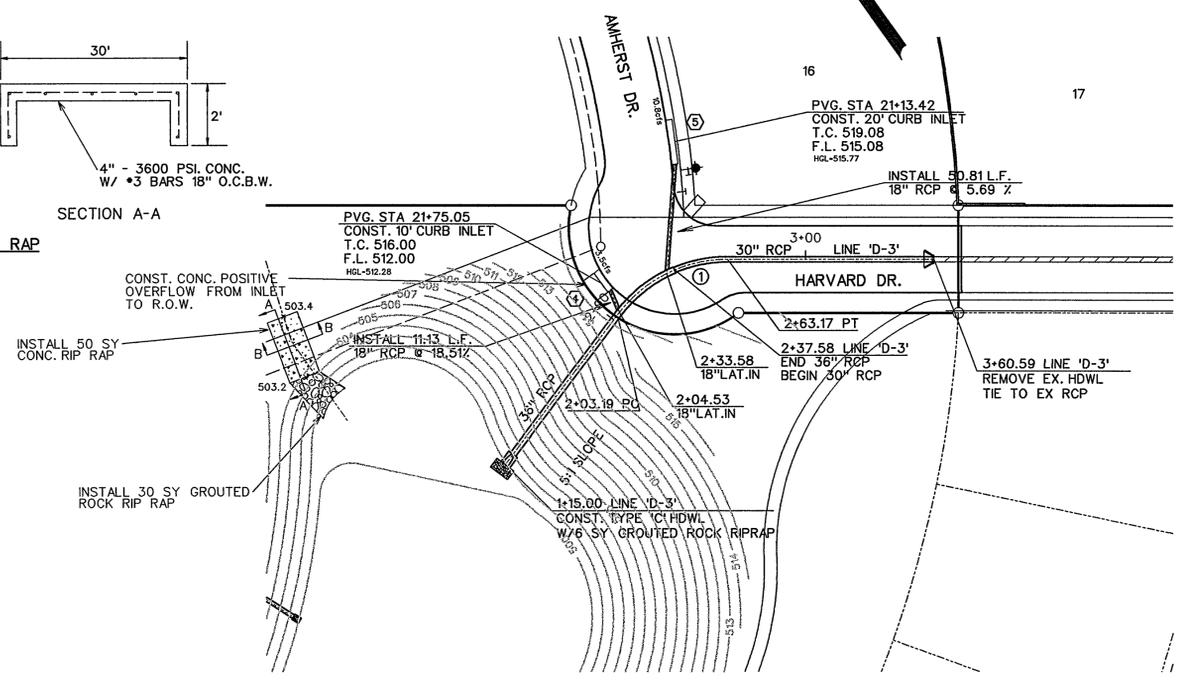
|                     |                     |                  |                              |
|---------------------|---------------------|------------------|------------------------------|
| DRAWN BY<br>DS      | DESIGNED BY<br>DS   | CHECKED BY<br>WC | SHEET NO.<br><b>11 OF 18</b> |
| JOB NUMBER<br>11056 | DATE<br>AUGUST 2012 | SCALE:<br>1"=40' |                              |

|     |                                       |    |         |
|-----|---------------------------------------|----|---------|
| 1   | REVISED LINES D-1 AND D-2 (ELEVATION) | DS | 9-17-12 |
| NO. | REVISIONS                             | BY | DATE    |

SCALE: 1" = 40'



| CURVE DATA |             |
|------------|-------------|
| CURVE NO.  | ①           |
| Δ          | 52° 52' 38" |
| R          | 65.00'      |
| T          | 59.98'      |
| L          | 32.32'      |

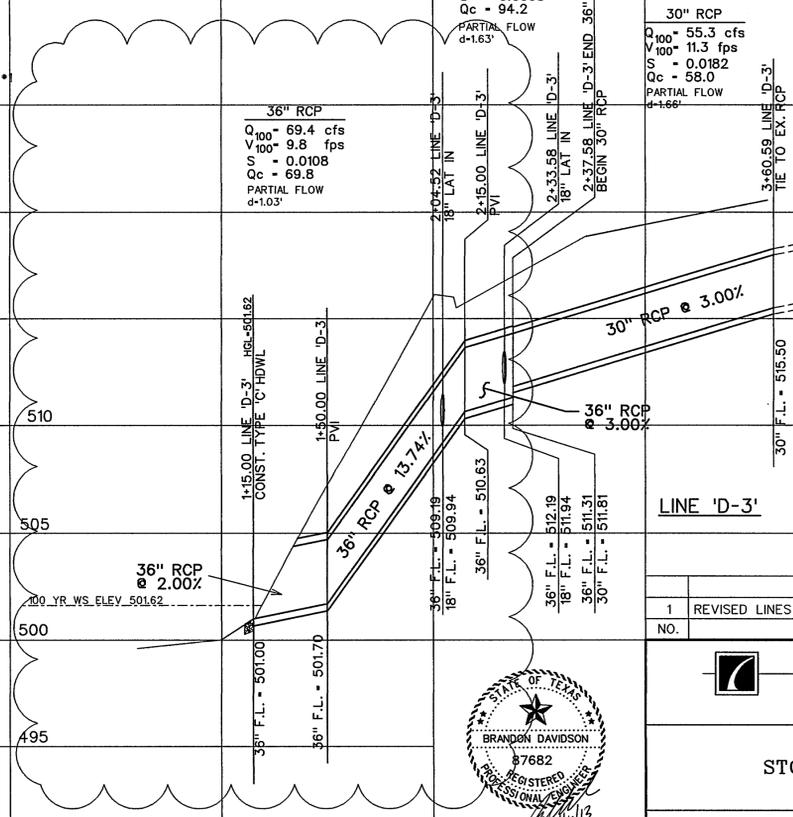
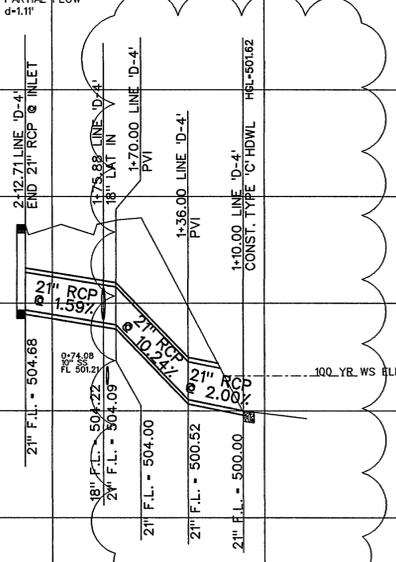


| 21" RCP          |            |
|------------------|------------|
| Q <sub>100</sub> | = 14.6 cfs |
| V <sub>100</sub> | = 6.11 fps |
| S                | = 0.0085   |
| Q <sub>c</sub>   | = 18.9     |
| PARTIAL FLOW     |            |
| d=1.11'          |            |

| 21" RCP          |            |
|------------------|------------|
| Q <sub>100</sub> | = 23.4 cfs |
| V <sub>100</sub> | = 9.7 fps  |
| S                | = 0.0218   |
| Q <sub>c</sub>   | = 22.3     |

| 36" RCP          |            |
|------------------|------------|
| Q <sub>100</sub> | = 66.0 cfs |
| V <sub>100</sub> | = 9.3 fps  |
| S                | = 0.0098   |
| Q <sub>c</sub>   | = 94.2     |
| PARTIAL FLOW     |            |
| d=1.63'          |            |

| 30" RCP          |            |
|------------------|------------|
| Q <sub>100</sub> | = 55.3 cfs |
| V <sub>100</sub> | = 11.3 fps |
| S                | = 0.0182   |
| Q <sub>c</sub>   | = 58.0     |
| PARTIAL FLOW     |            |
| d=1.66'          |            |



| NO. | REVISIONS                                   | BY | DATE    |
|-----|---|----|---------|
| 1   | REVISED LINES D-3 AND D-4 (POND ADJUSTMENT) | DS | 9-17-12 |



The seal appearing on this document was authorized by Brandon Davidson P.E. 87682, on April 10, 2013

AS-BUILT  
APRIL 2013  
BASED ON SURVEYING AT THE SITE AND INFORMATION PROVIDED BY CONTRACTORS

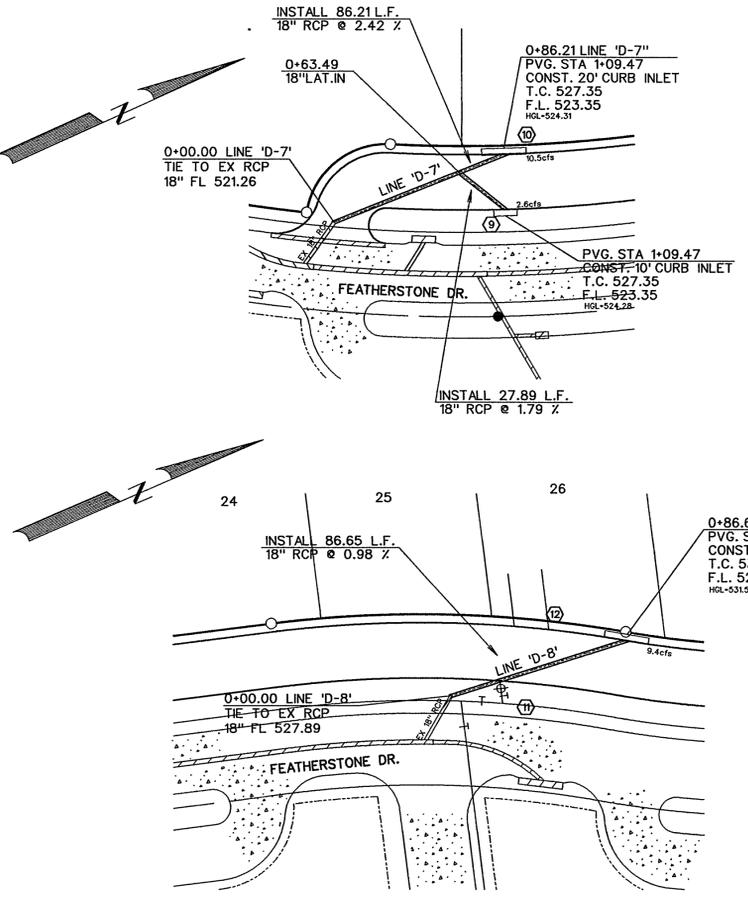
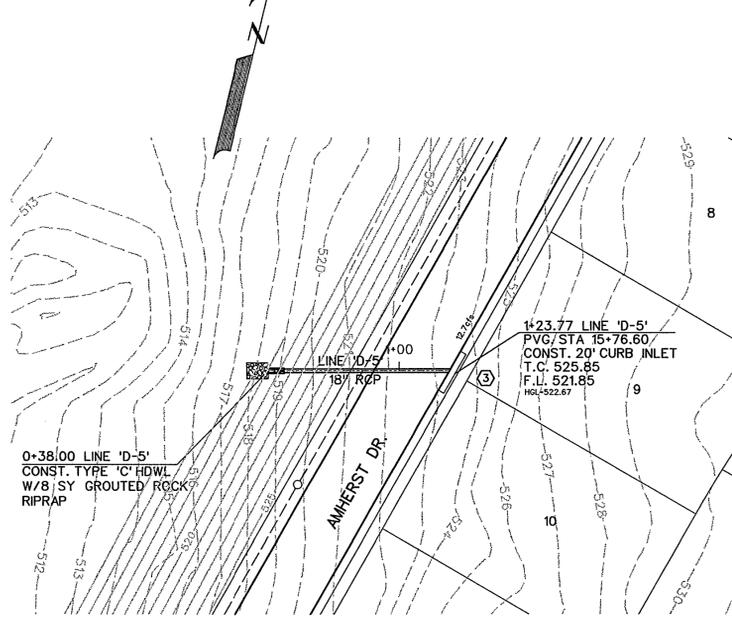
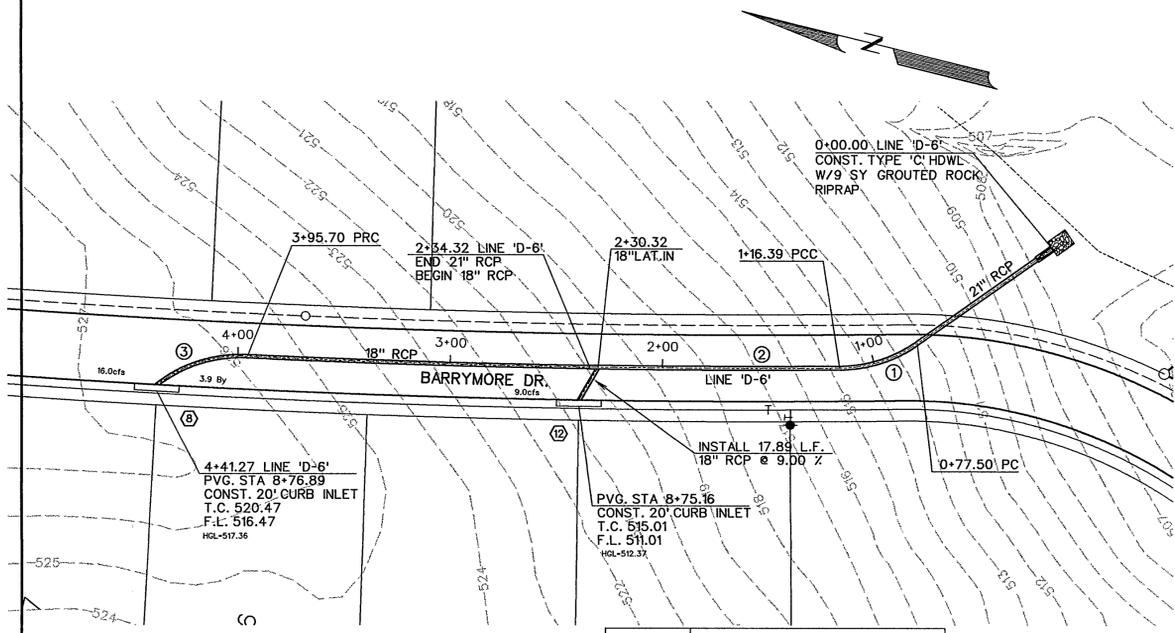
**CORWIN ENGINEERING, INC.**  
200 W. BELMONT, SUITE E  
ALLEN, TEXAS 75013 (972)396-1200  
TBPE FIRM #5951

DEVELOPMENT PLANS FOR  
**STONE CREEK PHASE III**  
ROCKWALL, TEXAS

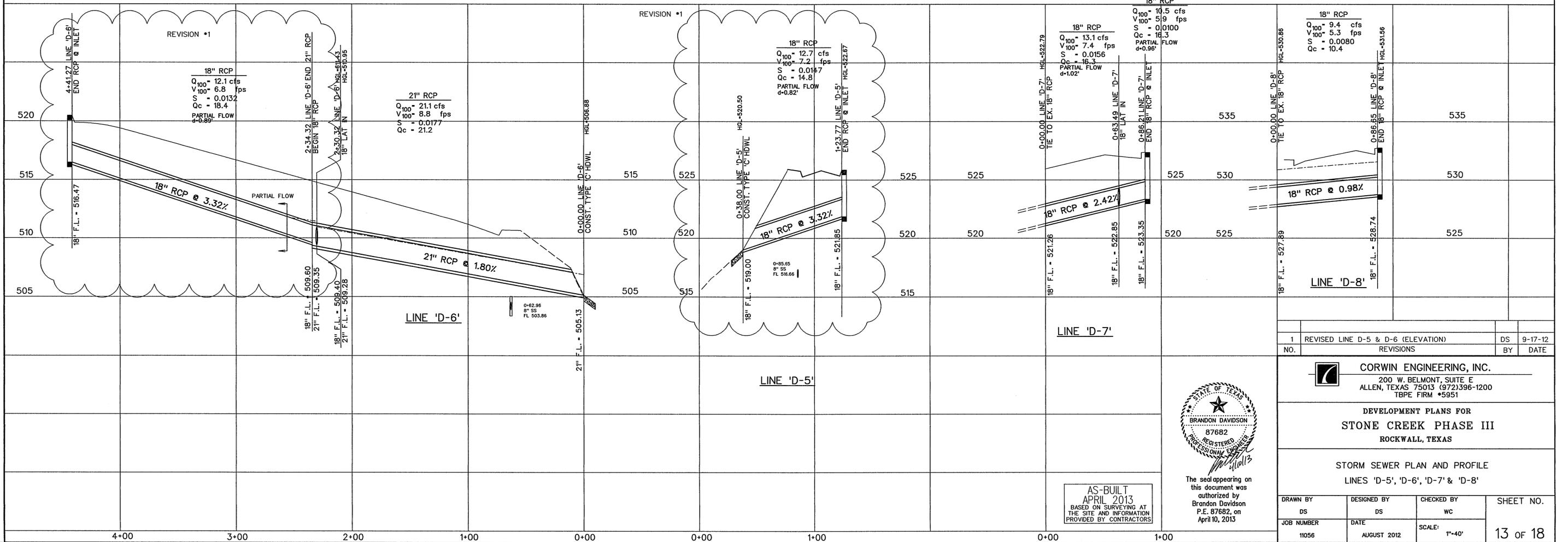
STORM SEWER PLAN AND PROFILE  
LINES 'D-3' & 'D-4'

| DRAWN BY            | DESIGNED BY         | CHECKED BY       | SHEET NO. |
|---------------------|---------------------|------------------|-----------|
| DS                  | DS                  | WC               | 12 OF 18  |
| JOB NUMBER<br>11056 | DATE<br>AUGUST 2012 | SCALE:<br>1"=40' |           |

SCALE: 1" = 40'



| CURVE DATA |             |             |             |
|------------|-------------|-------------|-------------|
| CURVE NO.  | ①           | ②           | ③           |
| Δ          | 34° 16' 36" | 30° 06' 37" | 40° 10' 04" |
| R          | 65.00'      | 5145.00'    | 65.00'      |
| T          | 20.04'      | 139.69'     | 23.77'      |
| L          | 38.89'      | 279.31'     | 45.57'      |



|     |                                    |    |         |
|-----|------------------------------------|----|---------|
| 1   | REVISED LINE D-5 & D-6 (ELEVATION) | DS | 9-17-12 |
| NO. | REVISIONS                          | BY | DATE    |

**CORVIN ENGINEERING, INC.**  
 200 W. BELMONT, SUITE E  
 ALLEN, TEXAS 75013 (972)396-1200  
 TBP FIRM #5951

**DEVELOPMENT PLANS FOR**  
**STONE CREEK PHASE III**  
**ROCKWALL, TEXAS**

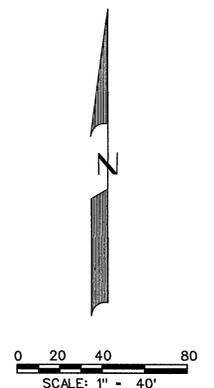
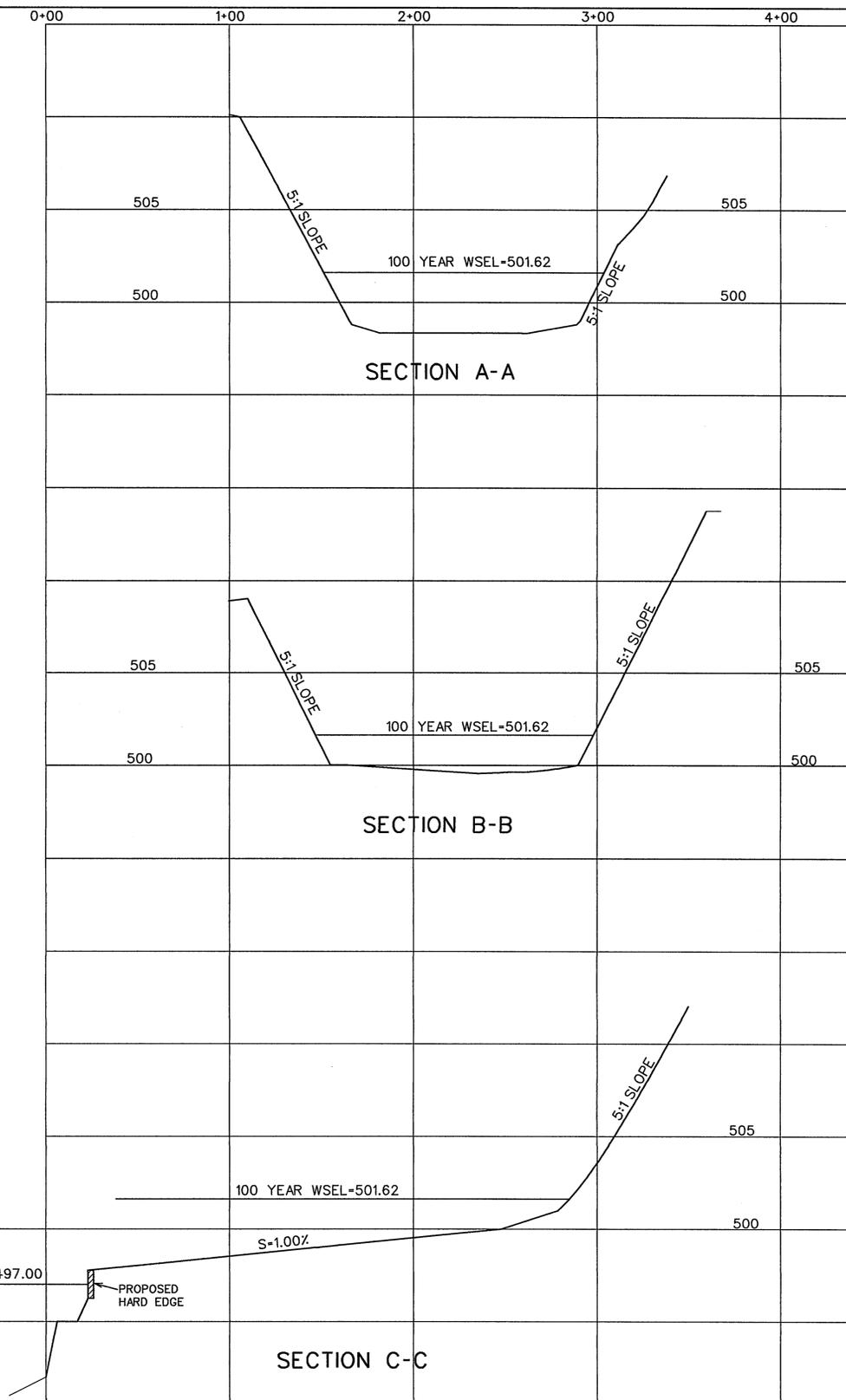
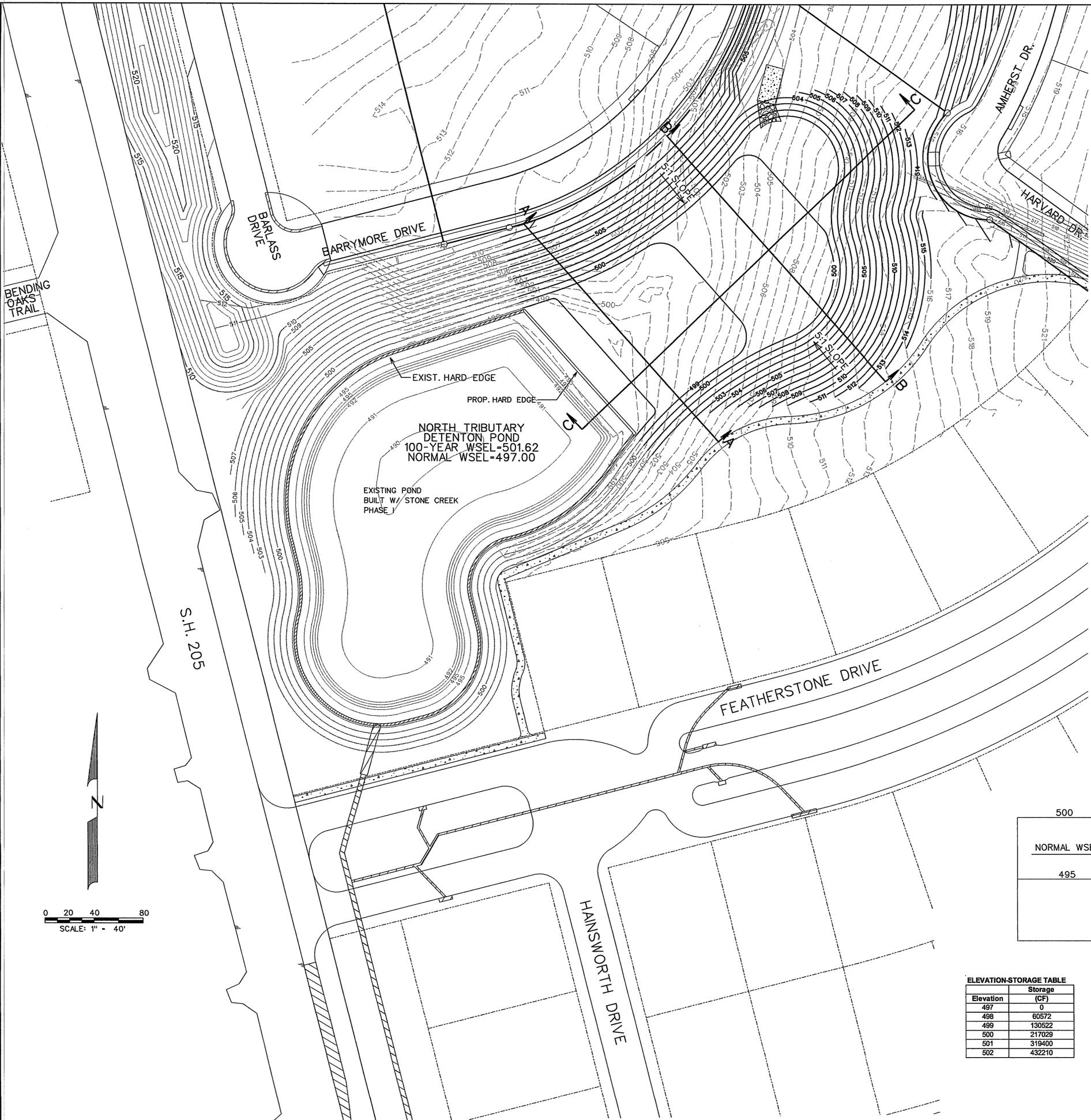
**STORM SEWER PLAN AND PROFILE**  
**LINE 'D-5', 'D-6', 'D-7' & 'D-8'**

|            |             |            |           |
|------------|-------------|------------|-----------|
| DRAWN BY   | DESIGNED BY | CHECKED BY | SHEET NO. |
| DS         | DS          | WC         | 13 OF 18  |
| JOB NUMBER | DATE        | SCALE:     |           |
| 11056      | AUGUST 2012 | 1"=40'     |           |



AS-BUILT  
APRIL 2013  
BASED ON SURVEYING AT  
THE SITE AND INFORMATION  
PROVIDED BY CONTRACTORS

The seal appearing on  
this document was  
authorized by  
Brandon Davidson  
P.E. 87682, on  
April 10, 2013



**ELEVATION-STORAGE TABLE**

| Elevation | Storage (CF) |
|-----------|--------------|
| 497       | 0            |
| 498       | 60572        |
| 499       | 130522       |
| 500       | 217029       |
| 501       | 319400       |
| 502       | 432210       |

AS-BUILT  
APRIL 2013  
BASED ON SURVEYING AT  
THE SITE AND INFORMATION  
PROVIDED BY CONTRACTORS



The seal appearing on  
this document was  
authorized by  
Brandon Davidson  
P.E. 87682, on  
April 10, 2013

**CORWIN ENGINEERING, INC.**  
200 W. BELMONT, SUITE E  
ALLEN, TEXAS 75013 (972) 396-1200

**CONSTRUCTION PLANS FOR  
STONE CREEK  
PHASE III  
ROCKWALL, TEXAS**

DETENTION POND PLAN

|                     |                    |                                      |                           |
|---------------------|--------------------|--------------------------------------|---------------------------|
| DRAWN BY<br>BDD     | DESIGNED BY<br>BDD | CHECKED BY<br>BDD                    | SHEET NO.<br><br>14 of 18 |
| JOB NUMBER<br>10560 | DATE<br>MARCH 2012 | SCALE:<br>1"=40' HORIZ<br>1"=4' VERT |                           |

# DETENTION CALCULATIONS - NORTH TRIBUTARY POND ULTIMATE DESIGN

## ALLOWABLE RELEASE RATE CALCULATIONS

### 2-YEAR STORM

#### North Tributary

#### Undeveloped Runoff Calculations

| Area # | Area (±) | Area (acres) | Existing Coefficient | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|--------|----------|--------------|----------------------|---------------------|----------------------------|-----------------------|
| 2      | 2729413  | 62.66        | 0.35                 | 20                  | 3.9                        | 85.5                  |

#### Post-Development Runoff Calculations

| Area # | Area (±) | Area (acres) | Proposed Coefficient | To - Proposed (min) | Rainfall Intensity (in/hr) | Q - Post Development (cfs) |
|--------|----------|--------------|----------------------|---------------------|----------------------------|----------------------------|
| 6      | 3893270  | 89.38        | 0.5                  | 10                  | 5.3                        | 236.9                      |

| Drainage Area to Pond | Area (±) | Area (acres) | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|-----------------------|----------|--------------|---------------------|----------------------------|-----------------------|
| 6                     | 82.34    | 0.5          | 10                  | 5.3                        | 218.2                 |

| Area Bypassing Pond | Area (±) | Area (acres) | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|---------------------|----------|--------------|---------------------|----------------------------|-----------------------|
| 7.04                | 0.5      | 10           | 5.3                 | 18.7                       |                       |

Allowed Release = 66.9

### 10-YEAR STORM

#### Ex. 8x4 Box - 850' South of Bending Oaks Trail

#### Undeveloped Runoff Calculations

| Area # | Area (±) | Area (acres) | Existing Coefficient | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|--------|----------|--------------|----------------------|---------------------|----------------------------|-----------------------|
| 2      | 2729413  | 62.66        | 0.35                 | 20                  | 5.9                        | 129.4                 |

#### Post-Development Runoff Calculations

| Area # | Area (±) | Area (acres) | Proposed Coefficient | To - Proposed (min) | Rainfall Intensity (in/hr) | Q - Post Development (cfs) |
|--------|----------|--------------|----------------------|---------------------|----------------------------|----------------------------|
| 6      | 3893270  | 89.38        | 0.5                  | 10                  | 7.1                        | 317.3                      |

| Drainage Area to Pond | Area (±) | Area (acres) | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|-----------------------|----------|--------------|---------------------|----------------------------|-----------------------|
| 6                     | 82.34    | 0.5          | 10                  | 7.1                        | 282.3                 |

| Area Bypassing Pond | Area (±) | Area (acres) | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|---------------------|----------|--------------|---------------------|----------------------------|-----------------------|
| 7.04                | 0.5      | 10           | 7.1                 | 25.0                       |                       |

Allowed Release = 104.4

### 25-YEAR STORM

#### Ex. 8x4 Box - 850' South of Bending Oaks Trail

#### Undeveloped Runoff Calculations

| Area # | Area (±) | Area (acres) | Existing Coefficient | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|--------|----------|--------------|----------------------|---------------------|----------------------------|-----------------------|
| 2      | 2729413  | 62.66        | 0.35                 | 20                  | 6.6                        | 144.7                 |

#### Post-Development Runoff Calculations

| Area # | Area (±) | Area (acres) | Proposed Coefficient | To - Proposed (min) | Rainfall Intensity (in/hr) | Q - Post Development (cfs) |
|--------|----------|--------------|----------------------|---------------------|----------------------------|----------------------------|
| 6      | 3893270  | 89.38        | 0.5                  | 10                  | 8.3                        | 370.9                      |

| Drainage Area to Pond | Area (±) | Area (acres) | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|-----------------------|----------|--------------|---------------------|----------------------------|-----------------------|
| 6                     | 82.34    | 0.5          | 10                  | 8.3                        | 341.7                 |

| Area Bypassing Pond | Area (±) | Area (acres) | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|---------------------|----------|--------------|---------------------|----------------------------|-----------------------|
| 7.04                | 0.5      | 10           | 8.3                 | 29.2                       |                       |

Allowed Release = 115.5

### 50-YEAR STORM

#### Ex. 8x4 Box - 850' South of Bending Oaks Trail

#### Undeveloped Runoff Calculations

| Area # | Area (±) | Area (acres) | Existing Coefficient | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|--------|----------|--------------|----------------------|---------------------|----------------------------|-----------------------|
| 2      | 2729413  | 62.66        | 0.35                 | 20                  | 7.5                        | 164.5                 |

#### Post-Development Runoff Calculations

| Area # | Area (±) | Area (acres) | Proposed Coefficient | To - Proposed (min) | Rainfall Intensity (in/hr) | Q - Post Development (cfs) |
|--------|----------|--------------|----------------------|---------------------|----------------------------|----------------------------|
| 6      | 3893270  | 89.38        | 0.5                  | 10                  | 9                          | 402.2                      |

| Drainage Area to Pond | Area (±) | Area (acres) | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|-----------------------|----------|--------------|---------------------|----------------------------|-----------------------|
| 6                     | 82.34    | 0.5          | 10                  | 9                          | 370.5                 |

| Area Bypassing Pond | Area (±) | Area (acres) | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|---------------------|----------|--------------|---------------------|----------------------------|-----------------------|
| 7.04                | 0.5      | 10           | 9                   | 31.7                       |                       |

Allowed Release = 132.8

### 100-YEAR STORM

#### Ex. 8x4 Box - 850' South of Bending Oaks Trail

#### Undeveloped Runoff Calculations

| Area # | Area (±) | Area (acres) | Existing Coefficient | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|--------|----------|--------------|----------------------|---------------------|----------------------------|-----------------------|
| 2      | 2729413  | 62.66        | 0.35                 | 20                  | 8.3                        | 182.0                 |

#### Post-Development Runoff Calculations

| Area # | Area (±) | Area (acres) | Proposed Coefficient | To - Proposed (min) | Rainfall Intensity (in/hr) | Q - Post Development (cfs) |
|--------|----------|--------------|----------------------|---------------------|----------------------------|----------------------------|
| 6      | 3893270  | 89.38        | 0.5                  | 10                  | 9.8                        | 438.0                      |

| Drainage Area to Pond | Area (±) | Area (acres) | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|-----------------------|----------|--------------|---------------------|----------------------------|-----------------------|
| 6                     | 82.34    | 0.5          | 10                  | 9.8                        | 403.5                 |

| Area Bypassing Pond | Area (±) | Area (acres) | To - Existing (min) | Rainfall Intensity (in/hr) | Q - Undeveloped (cfs) |
|---------------------|----------|--------------|---------------------|----------------------------|-----------------------|
| 7.04                | 0.5      | 10           | 9.8                 | 34.5                       |                       |

Allowed Release = 147.5

## DETENTION STORAGE REQUIREMENTS

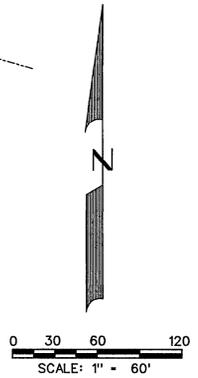
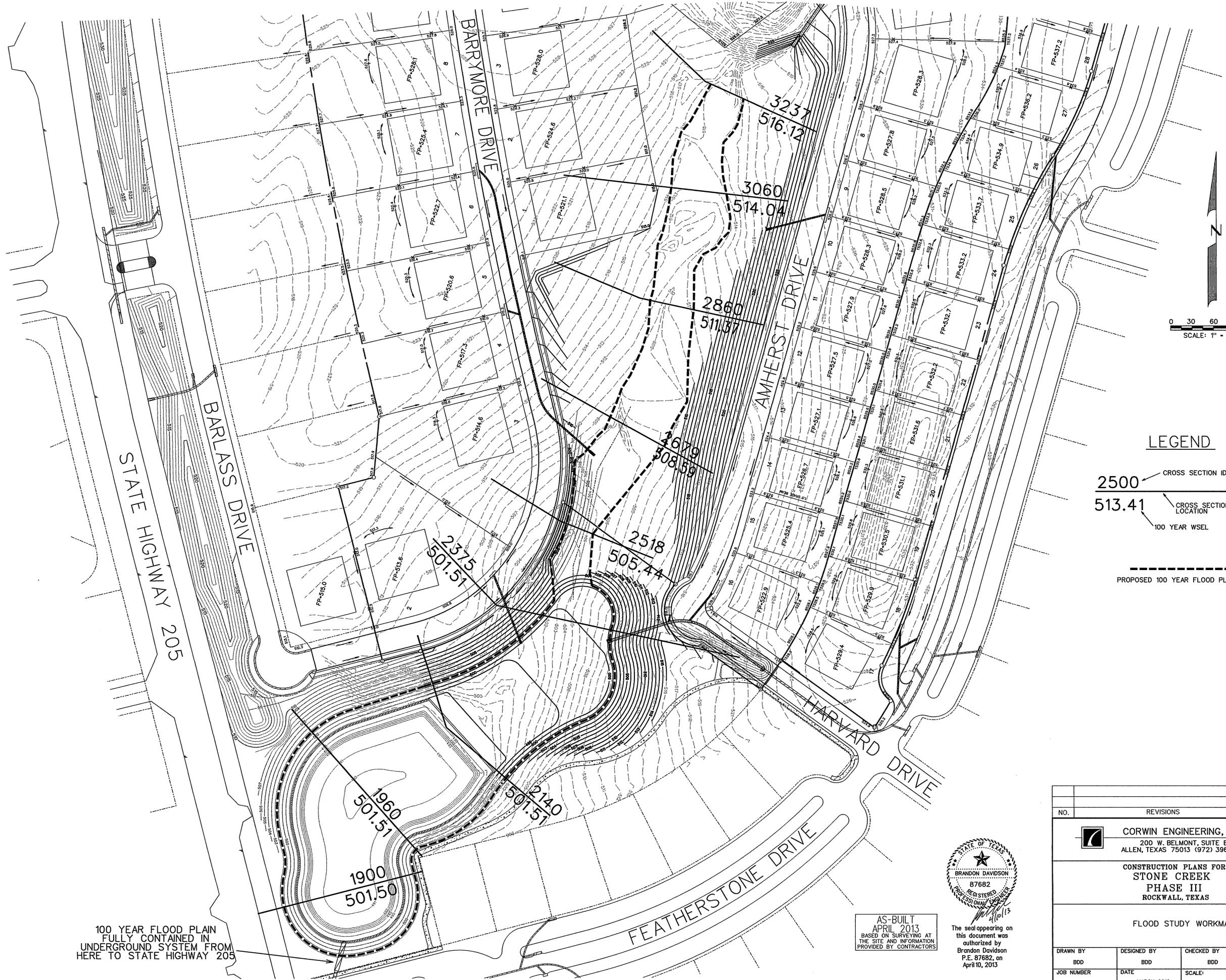
| DETENTION CALCULATIONS - 2 Year |                 |            |            |            |             |                    |              |                    |                    |                    |                   |               |
|---------------------------------|-----------------|------------|------------|------------|-------------|--------------------|--------------|--------------------|--------------------|--------------------|-------------------|---------------|
| Storm Duration                  | Inflow Duration | Area (AC.) | Future "C" | Future "K" | Future "CA" | Rainfall Intensity | Inflow (cfs) | Volume (cubic ft.) | Volume (cubic ft.) | Volume (cubic ft.) | Volume (acre-ft.) | Outflow (cfs) |
| 10                              | 20              | 82.34      | 0.50       | 1.00       | 41.17       | 5.30               | 218.2        | 130921             | 28321              | 102599             | 2.36              | 47.2          |
| 20                              | 30              | 82.34      | 0.50       | 1.00       | 41.17       | 3.90               | 160.6        | 192676             | 42482              | 150194             | 3.45              | 47.2          |
| 30                              | 40              | 82.34      | 0.50       | 1.00       | 41.17       | 3.30               | 135.9        | 244550             | 56642              | 187907             | 4.31              | 47.2          |
| 40                              | 50              | 82.34      | 0.50       | 1.00       | 41.17       | 2.60               | 107.0        | 256901             | 70803              | 186998             | 4.27              | 47.2          |
| 50                              | 60              | 82.34      | 0.50       | 1.00       | 41.17       | 2.30               | 94.7         | 284073             | 84584              | 199109             | 4.57              | 47.2          |
| 60                              | 70              | 82.34      | 0.50       | 1.00       | 41.17       | 1.90               | 78.2         | 281603             | 99124              | 182479             | 4.19              | 47.2          |
| 70                              | 80              | 82.34      | 0.50       | 1.00       | 41.17       | 1.60               | 74.1         | 311245             | 113285             | 197960             | 4.54              | 47.2          |
| 80                              | 90              | 82.34      | 0.50       | 1.00       | 41.17       | 1.70               | 70.0         | 335947             | 127445             | 208502             | 4.79              | 47.2          |
| 90                              | 100             | 82.34      | 0.50       | 1.00       | 41.17       | 1.60               | 65.9         | 355709             | 141606             | 214103             | 4.92              | 47.2          |
| 100                             | 110             | 82.34      | 0.50       | 1.00       | 41.17       | 1.50               | 61.8         | 370550             | 155767             | 214763             | 4.93              | 47.2          |

| DETENTION CALCULATIONS - 10 Year |                 |            |            |            |             |                    |              |                    |                    |                    |                   |               |
|----------------------------------|-----------------|------------|------------|------------|-------------|--------------------|--------------|--------------------|--------------------|--------------------|-------------------|---------------|
| Storm Duration                   | Inflow Duration | Area (AC.) | Future "C" | Future "K" | Future "CA" | Rainfall Intensity | Inflow (cfs) | Volume (cubic ft.) | Volume (cubic ft.) | Volume (cubic ft.) | Volume (acre-ft.) | Outflow (cfs) |
| 10                               | 20              | 82.34      | 0.50       | 1.00       | 41.17       | 7.10               | 292.3        | 175384             | 52311              | 123073             | 2.83              | 87.2          |
| 20                               | 30              | 82.34      | 0.50       | 1.00       | 41.17       | 5.90               | 242.9        | 291484             | 78467              | 213017             | 4.89              | 87.2          |
| 30                               | 40              | 82.34      | 0.50       | 1.00       | 41.17       | 4.80               | 197.6        | 355709             | 104622             | 251087             | 5.76              | 87.2          |
| 40                               | 50              | 82.34      | 0.50       | 1.00       | 41.17       | 4.00               | 164.7        | 395232             | 130778             | 264454             | 6.07              | 87.2          |
| 50                               | 60              | 82.34      | 0.50       | 1.00       | 41.17       | 3.50               | 144.1        | 432285             | 156933             | 275362             | 6.32              | 87.2          |
| 60                               | 70              | 82.34      | 0.50       | 1.00       | 41.17       | 3.00               | 123.5        | 444636             | 183099             | 261547             | 6.60              | 87.2          |
| 70                               | 80              | 82.34      | 0.50       | 1.00       | 41.17       | 2.80               | 115.3        | 484159             | 209244             | 274915             | 6.31              | 87.2          |
| 80                               | 90              | 82.34      | 0.50       | 1.00       | 41.17       | 2.60               | 107.0        | 513802             | 235400             | 278402             | 6.39              | 87.2          |
| 90                               | 100             | 82.34      | 0.50       | 1.00       | 41.17       | 2.50               | 102.9        | 553795             | 261556             | 284239             | 6.75              | 87.2          |
| 100                              | 110             | 82.34      | 0.50       | 1.00       | 41.17       | 2.30               | 94.7         | 568146             | 287711             | 280435             | 6.44              | 87.2          |

| DETENTION CALCULATIONS - 25 Year |                 |            |            |            |             |                    |              |                    |                    |                    |                   |               |
|----------------------------------|-----------------|------------|------------|------------|-------------|--------------------|--------------|--------------------|--------------------|--------------------|-------------------|---------------|
| Storm Duration                   | Inflow Duration | Area (AC.) | Future "C" | Future "K" | Future "CA" | Rainfall Intensity | Inflow (cfs) | Volume (cubic ft.) | Volume (cubic ft.) | Volume (cubic ft.) | Volume (acre-ft.) | Outflow (cfs) |
| 10                               | 20              | 82.34      | 0.50       | 1.00       | 41.17       | 8.30               | 341.7        | 205027             | 63658              | 141369             | 3.25              | 106.1         |
| 20                               | 30              | 82.34      | 0.50       | 1.00       | 41.17       | 6.60               | 271.7        | 320066             | 95497              | 230580             | 5.29              | 106.1         |
| 30                               | 40              | 82.34      | 0.50       | 1.00       | 41.17       | 5.50               | 226.4        | 407363             | 127316             | 290267             | 6.43              | 106.1         |
| 40                               | 50              | 82.34      | 0.50       | 1.00       | 41.17       | 4.60               | 189.4        | 454517             | 159145             | 295372             | 6.78              | 106.1         |
| 50                               | 60              | 82.34      | 0.50       | 1.00       | 41.17       | 4.00               | 164.7        | 484040             | 180973             | 303067             | 6.96              | 106.1         |
| 60                               | 70              | 82.34      | 0.50       | 1.00       | 41.17       | 3.50               | 144.1        | 518742             | 222802             | 295940             | 6.79              | 106.1         |
| 70                               | 80              | 82.34      | 0.50       | 1.00       | 41.17       | 3.30               | 135.9        | 576916             | 254631             | 315905             | 7.25              | 106.1         |
| 80                               | 90              | 82.34      | 0.50       | 1.00       | 41.17       | 3.10               | 127.6        | 612610             | 285460             | 326149             | 7.48              | 106.1         |
| 90                               | 100             | 82.34      | 0.50       | 1.00       | 41.17       | 2.90               | 119.4        | 644722             | 318289             | 326433             | 7.49              | 106.1         |
| 100                              | 110             | 82.34      | 0.50       | 1.00       | 41.17       | 2.70               | 111.2        | 666954             | 350118             | 316836             | 7.27              | 106.1         |

| DETENTION CALCULATIONS - 50 Year |                 |            |            |            |             |                    |              |                    |                    |                    |                   |               |
|----------------------------------|-----------------|------------|------------|------------|-------------|--------------------|--------------|--------------------|--------------------|--------------------|-------------------|---------------|
| Storm Duration                   | Inflow Duration | Area (AC.) | Future "C" | Future "K" | Future "CA" | Rainfall Intensity | Inflow (cfs) | Volume (cubic ft.) | Volume (cubic ft.) | Volume (cubic ft.) | Volume (acre-ft.) | Outflow (cfs) |
| 10                               | 20              | 82.34      | 0.50       | 1.00       | 41.17       | 9.00               | 370.5        | 222318             | 71656              | 147662             | 3.39              | 124.4         |
| 20                               | 30              | 82.34      | 0.50       | 1.00       | 41.17       | 7.50               | 305.8        | 370530             | 111985             | 268445             | 6.94              | 124.4         |
| 30                               | 40              | 82.34      | 0.50       | 1.00       | 41.17       | 6.10               | 251.1        | 452047             | 149313             | 302734             | 6.95              | 124.4         |
| 40                               | 50              | 82.34      | 0.50       | 1.00       | 41.17       | 5.20               | 214.1        | 513802             | 166641             | 327161             | 7.51              | 124.4         |
| 50                               | 60              | 82.34      | 0.50       | 1.00       | 41.17       | 4.50               | 185.3        | 555795             | 223969             | 331626             | 7.62              | 124.4         |
| 60                               | 70              | 82.34      | 0.50       | 1.00       | 41.17       | 3.90               | 160.6        | 576916             | 261297             | 316790             | 7.27              | 124.4         |
| 70                               | 80              | 82.34      | 0.50       | 1.00       | 41.17       | 3.70               | 152.3        | 639762             | 298929             | 341166             | 7.83              | 124.4         |
| 80                               | 90              | 82.34      | 0.50       | 1.00       | 41.17       | 3.50               | 144.1        | 691656             | 335954             | 355702             | 8.17              | 124.4         |
| 90                               | 100             | 82.34      | 0.50       | 1.00       | 41.17       | 3.30               | 135.9        | 733649             | 373282             | 360368             | 8.27              | 124.4         |
| 100                              | 110             | 82.34      | 0.50       | 1.00       | 41.17       | 3.00               | 123.5        | 741060             | 410610             | 330450             | 7.59              | 124.4         |

| DETENTION CALCULATIONS - 100 Year |                 |            |            |            |             |                    |              |                    |                    |                    |                   |               |
|-----------------------------------|-----------------|------------|------------|------------|-------------|--------------------|--------------|--------------------|--------------------|--------------------|-------------------|---------------|
| Storm Duration                    | Inflow Duration | Area (AC.) | Future "C" | Future "K" | Future "CA" | Rainfall Intensity | Inflow (cfs) | Volume (cubic ft.) | Volume (cubic ft.) | Volume (cubic ft.) | Volume (acre-ft.) | Outflow (cfs) |
| 10                                | 20              | 82.34      | 0.50       | 1.00       | 41.17       | 9.80               | 403.5        | 242080             | 84672              | 157407             | 3.61              | 141.1         |
| 20                                | 30              | 82.34      | 0.50       | 1.00       | 41.17       | 8.30               | 341.7        | 410053             | 127009             | 283045             | 6.50              | 141.1         |
| 30                                | 40              | 82.34      | 0.50       | 1.00       | 41.17       | 6.90               | 284.1        | 511331             | 169345             | 341987             | 7.85              | 141.1         |
| 40                                | 50              | 82.34      | 0.50       | 1.00       | 41.17       | 5.80               | 238.8        | 573086             | 211681             | 361405             | 8.30              | 141.1         |
| 50                                | 60              | 82.34      | 0.50       | 1.00       | 41.17       | 5.00               | 205.9        | 617550             | 254017             | 363533             | 8.35              | 141.1         |
| 60                                | 70              | 82.34      | 0.50       | 1.00       | 41.17       | 4.50               | 185.3        | 666954             | 296253             | 376901             | 8.61              | 141.1         |
| 70                                | 80              | 82.34      | 0.50       | 1.00       | 41.17       | 4.10               | 168.8        | 70847              | 335690</           |                    |                   |               |



**LEGEND**

- 2500 ——— CROSS SECTION ID
- 513.41 ——— CROSS SECTION LOCATION
- 100 YEAR WSEL
- PROPOSED 100 YEAR FLOOD PLAN LIMITS

100 YEAR FLOOD PLAN FULLY CONTAINED IN UNDERGROUND SYSTEM FROM HERE TO STATE HIGHWAY 205

AS-BUILT  
APRIL 2013  
BASED ON SURVEYING AT THE SITE AND INFORMATION PROVIDED BY CONTRACTORS



The seal appearing on this document was authorized by Brandon Davidson P.E. 87682, on April 10, 2013

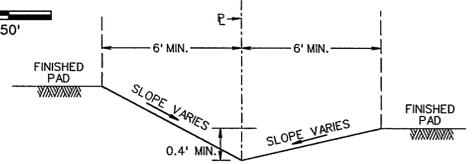
|  |             |            |           |    |      |
|--|-------------|------------|-----------|----|------|
| NO.  |             | REVISIONS  |           | BY | DATE |
| <b>CORWIN ENGINEERING, INC.</b><br>200 W. BELMONT, SUITE E<br>ALLEN, TEXAS 75013 (972) 396-1200            |             |            |           |    |      |
| <b>CONSTRUCTION PLANS FOR<br/>         STONE CREEK<br/>         PHASE III<br/>         ROCKWALL, TEXAS</b> |             |            |           |    |      |
| FLOOD STUDY WORKMAP  |             |            |           |    |      |
| DRAWN BY   | DESIGNED BY | CHECKED BY | SHEET NO. |    |      |
| BDD  | BDD         | BDD        | 15B of 18 |    |      |
| JOB NUMBER   | DATE        | SCALE:     |           |    |      |
| 11056  | MARCH 2012  | 1"=60'     |           |    |      |



- Wall Notes:**
1. No part of the wall (footing, tie back etc. shall be const. offsite, in an easement or in the R.O.W. Walls must be on one property.
  2. All walls 4' or taller shall require a signed/sealed set of engineered drawings. Wall engineer shall submit signed/sealed letter prior to acceptance stating that the walls were constructed per drawings.
  3. All fill to be compacted to 95% std. density using a sheep's foot roller.

- NOTES:**
1. Finish Floor Elevation to be 0.70 Feet above Finished Pad.(FP)
  2. Additional Erosion Control to be installed in Parkways as determined by the City Inspector.
  3. Finished Pad Elevations are within ± 0.3 Feet.

SCALE: 1" = 50'



TYPICAL SWALE SIDE YARD  
N.T.S.

**Note:**  
Each lot will need a detailed grading plan with building permit submittal. This is a general grading plan for site work only.

AS-BUILT  
APRIL 2013  
BASED ON SURVEYING AT THE SITE AND INFORMATION PROVIDED BY CONTRACTORS



The seal appearing on this document was authorized by Brandon Davidson P.E. 87682, on April 10, 2013

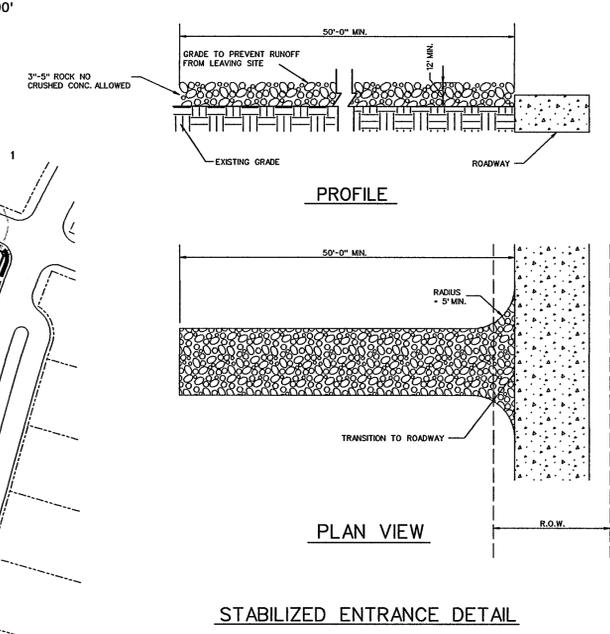
**CORWIN ENGINEERING, INC.**  
200 W. BELMONT, SUITE E  
ALLEN, TEXAS 75013 (972)396-1200  
TBPE FIRM #5951

DEVELOPMENT PLANS FOR  
**STONE CREEK PHASE III**  
ROCKWALL, TEXAS

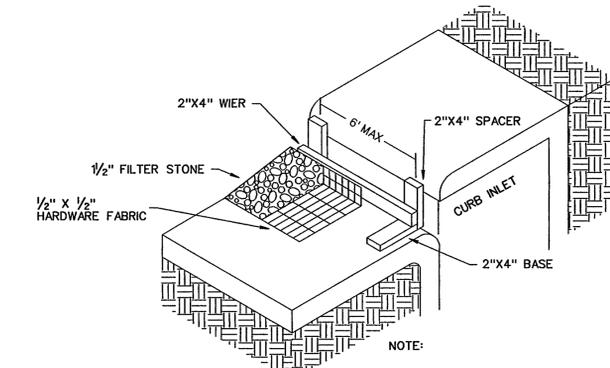
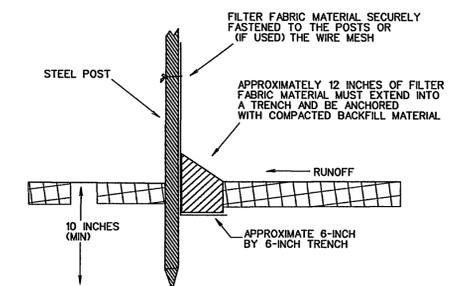
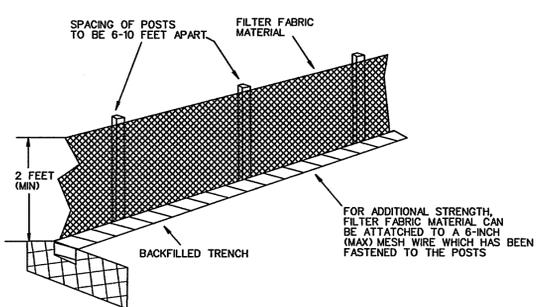
GRADING PLAN

|                     |                         |                  |           |
|---------------------|-------------------------|------------------|-----------|
| DRAWN BY<br>DS      | DESIGNED BY<br>DS       | CHECKED BY<br>WC | SHEET NO. |
| JOB NUMBER<br>11056 | DATE<br>AUGUST 2012     | SCALE:<br>1"=50' | 16 OF 18  |
| 1                   | REVISED PADS ELEVATIONS | DS               | 9-17-12   |
| NO.                 | REVISIONS               | BY               | DATE      |

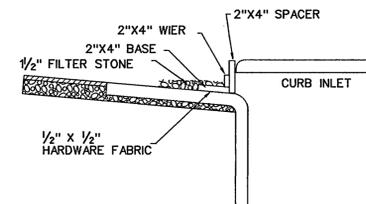




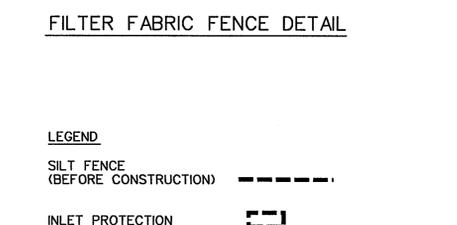
- CONSTRUCTION SEQUENCE**
1. GRADING CONTRACTOR TO INSTALL TEMPORARY STABILIZED ENTRANCE.
  2. INSTALL SILT FENCE AS SHOWN, (TS-600 POLY FELT) PER C.O.G. SPECIFICATIONS.
  3. PERFORM GRADING AND UTILITY CONSTRUCTION.
  4. AFTER THE INLET BOTTOMS ARE CONSTRUCTED, THE INLETS SHALL BE FILLED WITH STONE AND COVERED WITH A FILTER FABRIC (TS-600 POLY FELT OR EQUIVALENT) BY UTILITY CONTRACTOR.
  5. PRIOR TO CITY RELEASING PAVING, SOD OR SEEDED CURLEX SHALL BE INSTALLED ON SIDES AND BOTTOM OF ALL DETENTION PONDS.
  6. AFTER PAVING AND COMPLETION OF INLETS, INLET FILTERS SHALL BE INSTALLED IN ALL INLETS AND MAINTAINED UNTIL RE-VEGETATION HAS BEEN COMPLETED BY PAVING CONTRACTOR.
  7. SILT FENCE SHALL REMAIN IN PLACE UNTIL RE-VEGETATION HAS BEEN COMPLETED.
  8. PAVING CONTRACTOR SHALL REMOVE TEMPORARY STABILIZED ENTRANCE.
  9. PRIOR TO CITY ACCEPTANCE THE PAVING CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ANY MUD OR SILT WHICH COLLECTS ON THE EXISTING AND NEW PAVEMENT.



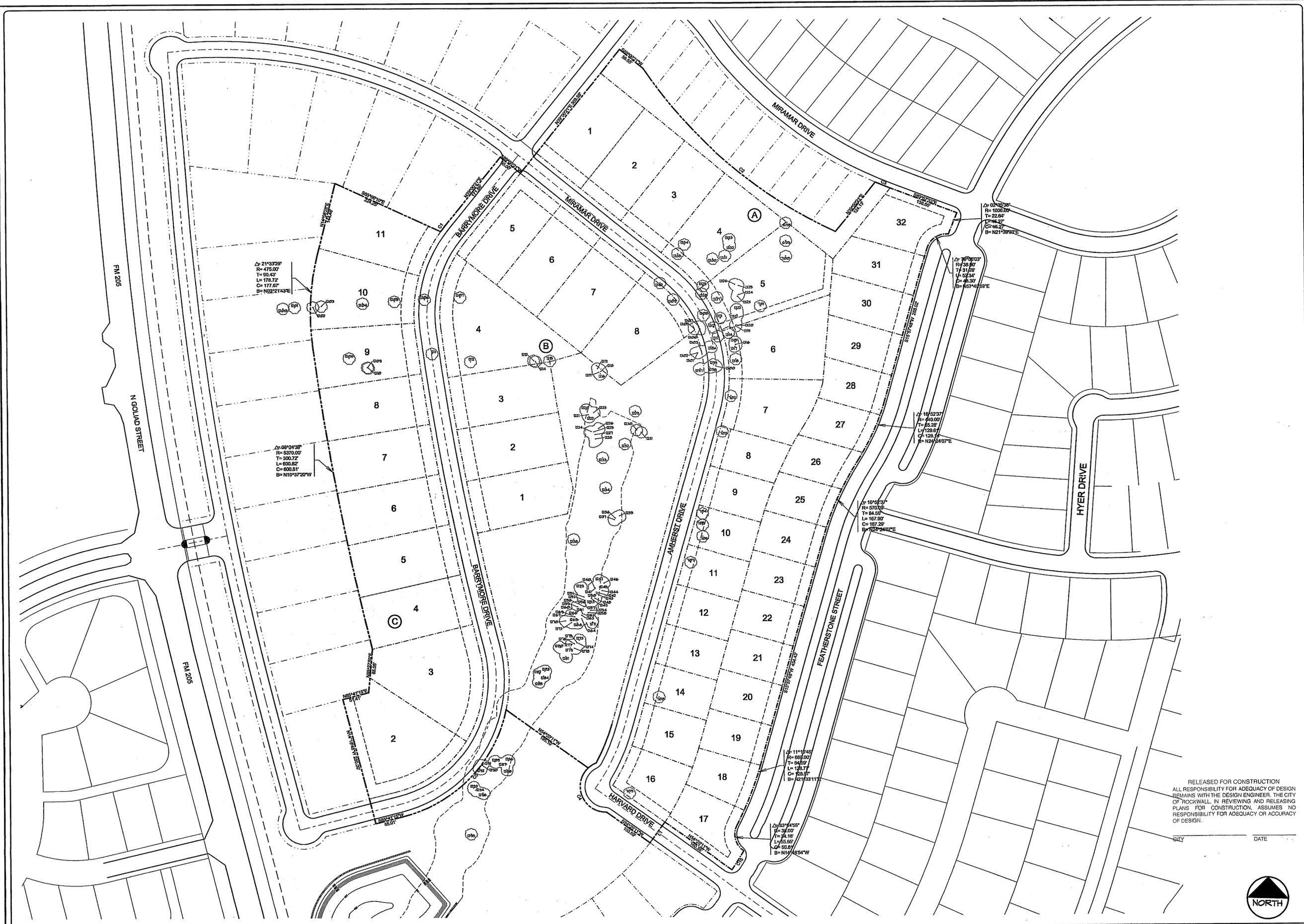
**TYPE B CURB INLET PROTECTION**



**INLET SECTION**



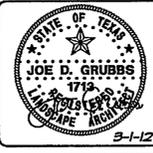
| NO.  | REVISIONS          | BY                | DATE      |
|--|--------------------|-------------------|-----------|
| <p><b>CORWIN ENGINEERING, INC.</b><br/>200 W. BELMONT, SUITE E<br/>ALLEN, TEXAS 75013 (972) 396-1200</p> |                    |                   |           |
| <p><b>CONSTRUCTION PLANS FOR<br/>STONE CREEK<br/>PHASE III<br/>ROCKWALL, TEXAS</b></p>                   |                    |                   |           |
| <p><b>POLLUTION PREVENTION PLAN</b></p>  |                    |                   |           |
| DRAWN BY<br>CMF  | DESIGNED BY<br>CEI | CHECKED BY<br>CEI | SHEET NO. |
| JOB NUMBER<br>11056  | DATE<br>JUNE 2012  | SCALE:<br>1"=100' | 18 OF 18  |



RELEASED FOR CONSTRUCTION  
 ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN  
 REMAINS WITH THE DESIGN ENGINEER. THE CITY  
 OF ROCKWALL, IN REVIEWING AND RELEASING  
 PLANS FOR CONSTRUCTION, ASSUMES NO  
 RESPONSIBILITY FOR ADEQUACY OR ACCURACY  
 OF DESIGN.



**Grubbs Design Group**  
 Landscape Architecture - Construction Management



# Stone Creek Phase 3

Rockwall, Texas

Issued For:  
**CONSTRUCTION**  
 Job No.  
**12103.00**  
 Scale  
**1" = 80'-0"**  
 Drawn By:  
**JDS**  
 Date  
**3-1-2012**

## Existing Tree Survey

Sheet Number:  
**TS1**  
 of TS2 Sheets

Grubbs Design Group, P.L.L.C. - 403 South Tennessee Street - McKinney, Texas 75069 - Phone (972) 548-5020

| TREE ID NO. | TREE CALIPER SIZE | TREE TYPE COMMON NAME | CONDITION OF TREE |
|-------------|-------------------|-----------------------|-------------------|
| 1200        | 11"               | HACKBERRY             | GOOD              |
| 1201        | 11"               | HACKBERRY             | GOOD              |
| 1202        | 11"               | HACKBERRY             | GOOD              |
| 1203        | 12"               | HACKBERRY             | GOOD              |
| 1204        | 12"               | HACKBERRY             | GOOD              |
| 1205        | 11"               | HACKBERRY             | GOOD              |
| 1206        | 12"               | HACKBERRY             | GOOD              |
| 1207        | 4"                | HERCULES CLUB         | GOOD              |
| 1208        | 12"               | HACKBERRY             | GOOD              |
| 1209        | 14" M.T.          | HACKBERRY             | GOOD              |
| 1210        | 12"               | HACKBERRY             | GOOD              |
| 1211        | 5"                | HERCULES CLUB         | GOOD              |
| 1212        | 6"                | HERCULES CLUB         | GOOD              |
| 1213        | 11"               | HACKBERRY             | GOOD              |
| 1214        | 6"                | HERCULES CLUB         | GOOD              |
| 1215        | 14"               | HACKBERRY             | GOOD              |
| 1216        | 15"               | HACKBERRY             | GOOD              |
| 1217        | 16" M.T.          | HACKBERRY             | GOOD              |
| 1218        | 11"               | HACKBERRY             | GOOD              |
| 1219        | 16"               | HACKBERRY             | GOOD              |
| 1220        | 12"               | HACKBERRY             | GOOD              |
| 1221        | 5"                | HERCULES CLUB         | GOOD              |
| 1222        | 12"               | HACKBERRY             | GOOD              |
| 1223        | 11"               | HACKBERRY             | LEANS 45 DEGREES  |
| 1224        | 4"                | AMERICAN ELM          | GOOD              |
| 1225        | 5"                | AMERICAN ELM          | GOOD              |
| 1226        | 4"                | AMERICAN ELM          | GOOD              |
| 1227        | 5"                | AMERICAN ELM          | GOOD              |
| 1228        | 6"                | AMERICAN ELM          | GOOD              |
| 1229        | 21"               | AMERICAN ELM          | GOOD              |
| 1230        | 11"               | AMERICAN ELM          | GOOD              |
| 1231        | 13"               | CEDAR ELM             | GOOD              |
| 1232        | 7" M.T.           | HERCULES CLUB         | GOOD              |
| 1233        | 3"                | HERCULES CLUB         | GOOD              |
| 1234        | 13"               | HACKBERRY             | GOOD              |
| 1235        | 13"               | HACKBERRY             | GOOD              |
| 1236        | 13"               | HACKBERRY             | GOOD              |
| 1237        | 16" M.T.          | HACKBERRY             | GOOD              |
| 1238        | 33" M.T.          | ASH                   | GOOD              |
| 1239        | 25" M.T.          | ASH                   | GOOD              |
| 1240        | 4"                | ASH                   | GOOD              |

| TREE ID NO. | TREE CALIPER SIZE | TREE TYPE COMMON NAME | CONDITION OF TREE |
|-------------|-------------------|-----------------------|-------------------|
| 1241        | 3"                | ASH                   | GOOD              |
| 1242        | 5"                | ASH                   | GOOD              |
| 1243        | 3"                | ASH                   | GOOD              |
| 1244        | 6"                | ASH                   | GOOD              |
| 1245        | 4"                | ASH                   | GOOD              |
| 1246        | 3"                | ASH                   | GOOD              |
| 1247        | 5"                | ASH                   | GOOD              |
| 1248        | 4"                | ASH                   | GOOD              |
| 1249        | 4"                | ASH                   | GOOD              |
| 1250        | 4"                | ASH                   | GOOD              |
| 1251        | 5"                | ASH                   | GOOD              |
| 1252        | 3"                | ASH                   | GOOD              |
| 1253        | 7"                | ASH                   | GOOD              |
| 1254        | 4"                | ASH                   | GOOD              |
| 1255        | 5"                | ASH                   | GOOD              |
| 1256        | 5"                | ASH                   | GOOD              |
| 1257        | 6"                | ASH                   | GOOD              |
| 1258        | 7"                | ASH                   | GOOD              |
| 1259        | 6"                | ASH                   | GOOD              |
| 1260        | 5"                | ASH                   | GOOD              |
| 1261        | 4"                | ASH                   | GOOD              |
| 1262        | 5"                | ASH                   | GOOD              |
| 1263        | 4"                | ASH                   | GOOD              |
| 1264        | 4"                | ASH                   | GOOD              |
| 1265        | 5"                | ASH                   | GOOD              |
| 1266        | 5"                | ASH                   | GOOD              |
| 1267        | 4"                | ASH                   | GOOD              |
| 1268        | 4"                | ASH                   | GOOD              |
| 1269        | 5"                | AMERICAN ELM          | GOOD              |
| 1270        | 6"                | ASH                   | GOOD              |
| 1271        | 5"                | ASH                   | GOOD              |
| 1272        | 5"                | ASH                   | GOOD              |
| 1273        | 7"                | ASH                   | GOOD              |
| 1274        | 4"                | ASH                   | GOOD              |
| 1275        | 5"                | ASH                   | GOOD              |
| 1276        | 3"                | AMERICAN ELM          | GOOD              |
| 1277        | 8" M.T.           | ASH                   | GOOD              |
| 1278        | 6"                | ASH                   | GOOD              |
| 1279        | 7"                | ASH                   | GOOD              |
| 1280        | 5"                | ASH                   | GOOD              |
| 1281        | 9" M.T.           | ASH                   | GOOD              |

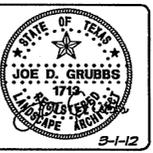
| TREE ID NO. | TREE CALIPER SIZE | TREE TYPE COMMON NAME | CONDITION OF TREE     |
|-------------|-------------------|-----------------------|-----------------------|
| 1282        | 5"                | AMERICAN ELM          | GOOD                  |
| 1283        | 6"                | ASH                   | GOOD                  |
| 1284        | 3"                | HERCULES CLUB         | GOOD                  |
| 1285        | 7"                | AMERICAN ELM          | GOOD                  |
| 1286        | 6"                | AMERICAN ELM          | GOOD                  |
| 1287        | 5"                | AMERICAN ELM          | GOOD                  |
| 1288        | 7"                | AMERICAN ELM          | GOOD                  |
| 1289        | 5"                | AMERICAN ELM          | GOOD                  |
| 1290        | 5"                | AMERICAN ELM          | GOOD                  |
| 1291        | 4"                | AMERICAN ELM          | GOOD                  |
| 1292        | 5"                | AMERICAN ELM          | GOOD                  |
| 1293        | 4"                | AMERICAN ELM          | GOOD                  |
| 1294        | 10" M.T.          | ASH                   | GOOD                  |
| 1295        | 38"               | AMERICAN ELM          | GOOD                  |
| 1296        | 7" M.T.           | HERCULES CLUB         | GOOD                  |
| 1297        | 27" M.T.          | HACKBERRY             | GOOD                  |
| 1298        | 12"               | HACKBERRY             | GOOD                  |
| 1299        | 11"               | HACKBERRY             | GOOD                  |
| 1300        | 15"               | HACKBERRY             | GOOD                  |
| 1301        | 11"               | HACKBERRY             | GOOD                  |
| 1302        | 5"                | CEDAR ELM             | GOOD                  |
| 1303        | 21"               | AMERICAN ELM          | GOOD                  |
| 1304        | 11"               | HACKBERRY             | GOOD                  |
| 1305        | 14"               | HACKBERRY             | GOOD                  |
| 1306        | 7"                | HACKBERRY             | GOOD                  |
| 1307        | 5"                | CEDAR ELM             | GOOD                  |
| 1308        | 12"               | AMERICAN ELM          | GOOD                  |
| 1309        | 11"               | HACKBERRY             | GOOD                  |
| 1310        | 11"               | HACKBERRY             | GROWN INTO METAL POST |
| 1311        | 11"               | CEDAR ELM             | GOOD                  |
| 1312        | 11" M.T.          | CEDAR ELM             | GOOD                  |
| 1313        | 15"               | HACKBERRY             | GOOD                  |
| 1314        | 11"               | HACKBERRY             | GOOD                  |
| 1315        | 14"               | HACKBERRY             | GOOD                  |
| 1316        | 12"               | HACKBERRY             | GOOD                  |
| 1317        | 15"               | HACKBERRY             | GOOD                  |
| 1318        | 26"               | HACKBERRY             | GOOD                  |
| 1319        | 15"               | HACKBERRY             | GOOD                  |
| 1320        | 11"               | HACKBERRY             | GOOD                  |
| 1321        | 10"               | HACKBERRY             | GOOD                  |
| 1322        | 11"               | HACKBERRY             | GOOD                  |

| TREE ID NO. | TREE CALIPER SIZE | TREE TYPE COMMON NAME | CONDITION OF TREE |
|-------------|-------------------|-----------------------|-------------------|
| 1323        | 12"               | HACKBERRY             | GOOD              |
| 1324        | 11"               | HACKBERRY             | GOOD              |
| 1325        | 11"               | HACKBERRY             | GOOD              |
| 1326        | 13"               | HACKBERRY             | GOOD              |
| 1327        | 11"               | HACKBERRY             | GOOD              |
| 1328        | 13"               | AMERICAN ELM          | GOOD              |
| 1329        | 16"               | HACKBERRY             | GOOD              |
| 1330        | 12"               | HACKBERRY             | GOOD              |
| 1331        | 5"                | AMERICAN ELM          | GOOD              |
| 1332        | 5"                | AMERICAN ELM          | GOOD              |
| 1333        | 11"               | HACKBERRY             | GOOD              |
| 1334        | 9"                | AMERICAN ELM          | GOOD              |
| 1335        | 11"               | HACKBERRY             | GOOD              |

| TREE ID NO. | TREE CALIPER SIZE | TREE TYPE COMMON NAME | CONDITION OF TREE |
|-------------|-------------------|-----------------------|-------------------|
| 698         | 14"               | HACKBERRY             | GOOD              |
| 699         | 12"               | HACKBERRY             | GOOD              |
| 700         | 12"               | HACKBERRY             | GOOD              |
| 701         | 6"                | AMERICAN ELM          | GOOD              |
| 702         | 6"                | HERCULES CLUB         | GOOD              |
| 703         | 5"                | HERCULES CLUB         | GOOD              |
| 704         | 13"               | HACKBERRY             | GOOD              |
| 705         | 5"                | HERCULES CLUB         | GOOD              |
| 706         | 5"                | HERCULES CLUB         | DECLINING         |
| 707         | 11"               | HACKBERRY             | GOOD              |
| 708         | 6"                | CHITTAM WOOD          | GOOD              |
| 709         | 8"                | HERCULES CLUB         | GOOD              |

RELEASED FOR CONSTRUCTION  
 ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN  
 REMAINS WITH THE DESIGN ENGINEER, THE CITY  
 OF ROCKWALL, IN REVIEWING AND RELEASING  
 PLANS FOR CONSTRUCTION, ASSUMES NO  
 RESPONSIBILITY FOR ADEQUACY OR ACCURACY  
 OF DESIGN.

CITY \_\_\_\_\_ DATE \_\_\_\_\_



# Stone Creek Phase 3 Rockwall, Texas

Issued For:  
**CONSTRUCTION**

Job No.  
**12103.00**

Scale

Drawn By:  
**JDS**

Date  
**3-1-2012**

# Existing Tree Survey

Sheet Number:  
**TS2**  
of TS2 Sheets

Grubbs Design Group, P.L.L.C. - 403 South Tennessee Street - McKinney, Texas 75069 - Phone (972) 548-5020