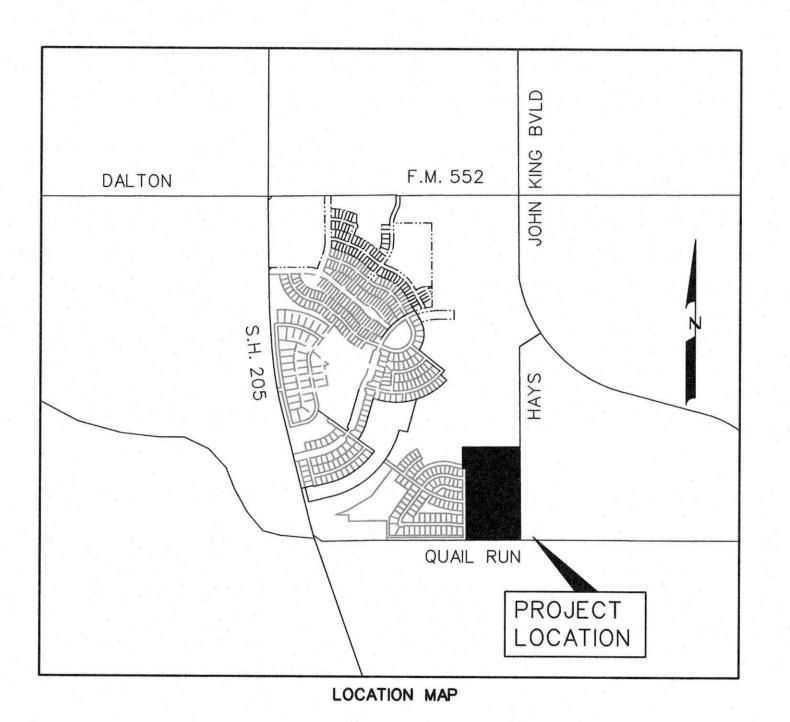
200 W. BELMONT, SUITE E

# DEVELOPMENT PLANS FOR STONE CREEK PHASE VIII CITY OF ROCKWALL, TEXAS



# PREPARED FOR STONE CREEK PHASE 8, LTD.

8214 WESTCHESTER DRIVE, SUITE 710, DALLAS, TEXAS 75225

# CORWIN ENGINEERING, INC. --- CONSULTING ENGINEERS

TBPE FIRM \*5951

ALLEN, TEXAS 75013

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

160

INDEX

1 TITLE 2 PLAT 3 EMERSON DRIVE 4 HARVARD DRIVE 5 NAKOMA DRIVE 6 MONTROSE DRIVE, MEMORIAL DRIVE WANETA DRIVE 8 QUAIL RUN ROAD 9 QUAIL RUN ROAD CROSS SECTIONS 10 HAYS ROAD 11 HAYS ROAD 12 HAYS ROAD CROSS SECTIONS 12A SIDEWALK RAMP DETAILS 13 WATER AND SANITARY SEWER PLAN 14 SANITARY SEWER PROFILES 15 SANITARY SEWER PROFILES 16 EXISTING CONDITIONS DRAINAGE AREA MAP 17 DRAINAGE AREA MAP 17A INTERIM CONDITIONS DRAINAGE AREA MAP 18 DRAINAGE CALCULATIONS 19 STORM SEWER PLAN AND PROFILE LINES 'D-1' & 'D-2' 20 STORM SEWER PLAN AND PROFILE LINE 'D-3' 21 STORM SEWER PLAN AND PROFILE LINE 'D-4' 22 STORM SEWER PLAN AND PROFILE LINE 'D-7' 23 STORM SEWER PLAN AND PROFILE LINE 'D-5' 24 STORM SEWER PROFILES 25 GRADING PLAN 26 EROSION CONTROL PLAN 27 SIGN AND LIGHT PLAN 28 QUAIL RUN ROAD TRAFFIC SIGNAGE PLAN 29 HAYS ROAD TRAFFIC SIGNAGE PLAN 30 PHASE 1 DETOUR PLAN - HAYS ROAD CLOSURE 31 PHASE 2 DETOUR PLAN - QUAIL RUN CLOSURE 32 PHASE 3 DETOUR PLAN - QUAIL RUN CLOSURE

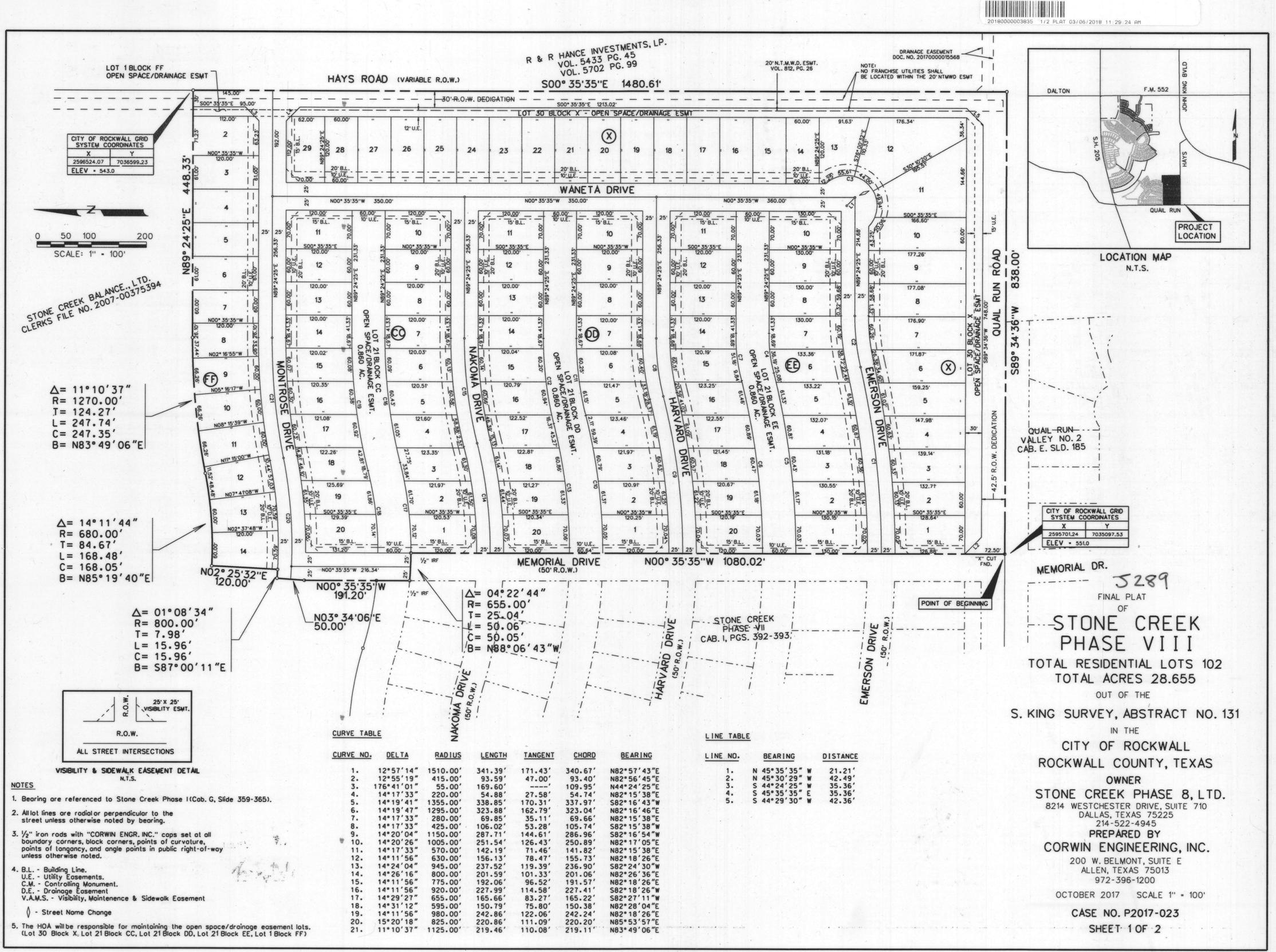


**BENCHMARK:** 

CITY OF ROCKWALL SURVEY MONUMENT ON AN INLET AT THE NORTHWEST CORNER OF FEATHERSTONE DR. AND HARVARD DR. ELEV.= 525.31

AS-BUILT SEPTEMBER 2018 BY CONTRACTORS (NOT FIELD VERIFIED)

| NO. | REVISIONS | DATE | OCTOBER 2016 |
|-----|-----------|------|--------------|



### OWNER'S CERTIFICATE

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS: STATE OF TEXAS

COUNTY OF ROCKWALL

We the undersigned owners of the land shown on this plat, and designated herein as the STONE CREEK PHASE VIII, 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 VIII, 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. The detention drainage system is to be maintained, repaired and owend by the subdivision.

7. 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 on 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 Phase 8, Ltd. an Texas limited partnership By: Stone Creek Phase 8 GP Corporation, a Texas corporation, its General Partner

STATE OF TEXAS

APPROVED

Richard Skorburg/ President

COUNTY OF DALLAS Before me, the undersigned authority, on this day personally appeared RICHARD 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 3. day of October, 2017.

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 alot shall be approved outboursed or constitute any representation. within such plot 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.

Planning & Zoning Commission

| 31811111 | PATRICIA SNYDER               |
|----------|-------------------------------|
|          |                               |
| ABEN     | Votary Public, State of Texas |
| TA SE    | Comm. Expires 06-30-2019      |
|          | Notary ID 128660037           |

and considerations therein expressed.

THE STATE OF TEXAS

COUNTY OF COLLIN

THE CS OUR HANDS



Thereby 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 15 day of New , 2017. NEU

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

WITNESS OUR HANDS, this 29th day of China , 2017. my William Mayor, City of Rockwall City Secretory City Engineer

SURVEYOR CERTIFICATE

Rockwoll, Texas.

## LEGAL DESCRIPTION

WHEREAS, STONE CREEK PHASE 8, LTD., is the owner of a tract of land situated in the S. King Survey, Abstract No. 131 in the City of Rockwall, Rockwall County, Texas, being part of a tract of land as described in Stone Creek Balance LTD., Clerks File No. 2007-00375394 in the Deed Records of Rockwall County, Texas, and being more particularly described as follows:

BEGINNING, at a "X" cut found at the most southeast corner of Stone Creek Phase VII, an addition to the City of Rockwall, as described in Cabinet I, Pages 392-394, in the Plat Records of Rockwall County, Texas;

THENCE, North 00° 35'35" West, along the east line of said Stone Creek Phase VII, for a distance of 1080.02 feet, to a 1/2 inch iron rod found, on a non-tangent curve to the right, having a radius of 655.00 feet, a central angle of 04° 22'44", and a tangent of 25.04 feet;

THENCE, continuing along said east line and with said curve to the right for an arc distance of 50.06 feet (Chord Bearing North 88° 06'43" West - 50.05 feet), to a 1/2 inch iron rod found:

THENCE, North 00° 35'35" West, continuing along said east line at 60.22 feet, passing a 1/2 inch iron rod found at the northeast corner of said Stone Creek Phase VII, and continuing for a total distance of 191.20 feet, to a 1/2 inch iron rod set with a yellow cop stamped with "Corwin Eng. Inc.";

THENCE, North 03° 34'06" East, for a distance of 50.00 feet, to a 1/2 inch iron rod set with a yellow cap stamped with "Corwin Eng. Inc.", on a non-tangent curve to the left, having a radius of 800.00 feet, a central angle of 01° 08'34", and a tangent of 7.98 feet;

THENCE, along said curve to the left for an arc distance of 15.96 feet (Chord Bearing South 87° 00'11" East - 15.96 feet), to a 1/2 inch iron rod set with a yellow cap stamped with "Corwin Eng. Inc.";

THENCE, North 02° 25'32" East, for a distance of 120.00 feet, to a 1/2 inch iron rod set with a yellow cap stamped with "Corwin Eng. Inc.", on a curve to the left, having a radius of 680.00 feet, a central angle of 14° 11'44", and a tangent of 84.67 feet;

THENCE, along said curve to the left for an arc distance of 168.48 feet (Chord Bearing North 85° 19'40" East - 168.05 feet), to a 1/2 inch iron rod set with a yellow cap stamped with "Corwin Eng. Inc.", at the point of reverse curvature of a curve to the right, having a radius of 1270.00 feet, a central angle of 11° 10'37", and a tangent of 124.27 feet;

THENCE, along said curve to the right for an arc distance of 247.74 feet (Chord Bearing North 83° 49'06" East - 247.35 feet), to a 1/2 inch iron rod set with a yellow cap stamped with "Corwin Eng. Inc.", at the point of tangency;

THENCE, North 89° 24'25" East, for a distance of 448.33 feet, to a 1/2 inch iron rod set with a yellow cap stamped with "Corwin Eng. Inc.", in the east line of said Stone Creek Balance tract being in Hayes Road (Variable R.O.W );

THENCE, South 00° 35'35" East, along the east line of said Stone Creek Balance tract and with said Hayes Road, for a distance of 1480.61 feet, to a 1/2 inch iron rod set with a yellow cap stamped with "Corwin Eng. Inc.", being the southeast corner of said Stone Creek Balance tract and being the approximate centerline of said Hayes Road and Quail Run Road (Variable R.O.W.);

THENCE, South 89° 34'36" West, along the south line of said Stone Creek Balance tract and with said Quail Run Road, at 417.06, passing the northeast corner of Quail Run Valley No. 2, an addition to the City of Rockwall, as described in Cab. E, Pg. 185, in said Plat Records, and continuing along the north line of said Quail Run Valley No. 2, for a total distance of 838.00 feet, to the POINT OF BEGINNING and containing 28.655 acres of land.

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 platting rules and regulations of the City Plan Commission of the City of

DATED the this 24 day of Oct . 2017.

WARREN L. CORWIN R.P.L.S. No. 4621



BEFORE ME, the undersigned, a Notary Public in and for the State of Texas, on this day personally oppeared 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

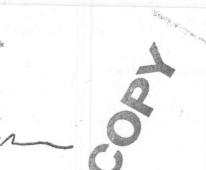
WITNESS MY HAND AND SEAL OF OFFICE, this

State of Texas

MARIA HALLFORD My Notory ID # 126048221 Expires January 27, 2020

Filed and Recorded Official Public Records Shelli Miller, County Clerk Rockwall County, Texas 03/06/2018 11:29:24 AM \$100.00

2018000000383



52.90

FINAL PLAT OF

## STONE CREEK PHASE VII

TOTAL RESIDENTIAL LOTS 102 TOTAL ACRES 28.655

OUT OF THE

S. KING SURVEY, ABSTRACT NO. 131

IN THE CITY OF ROCKWALL

ROCKWALL COUNTY, TEXAS

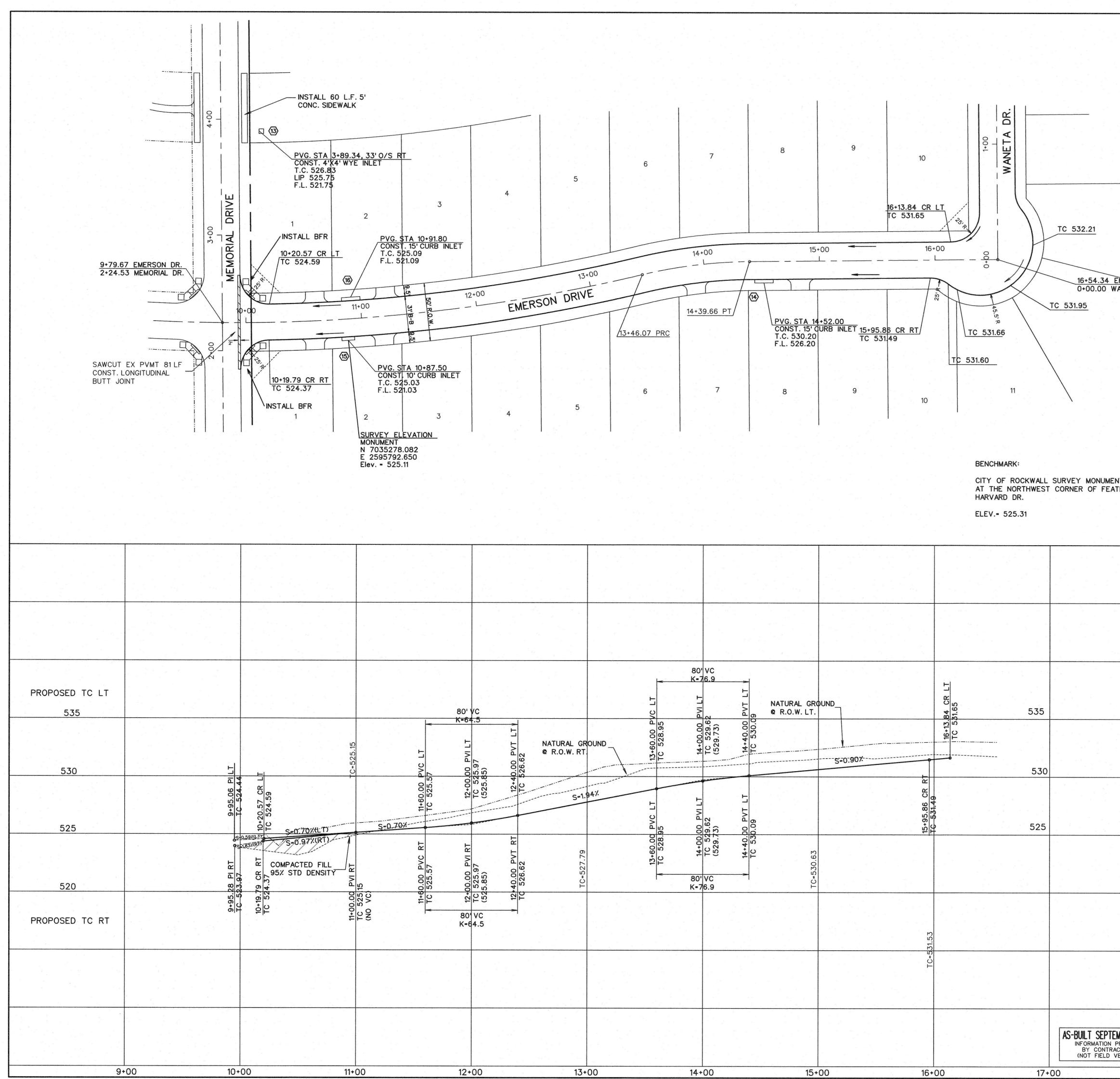
OWNER STONE CREEK PHASE 8, LTD. 8214 WESTCHESTER DRIVE, SUITE 710 DALLAS, TEXAS 75225 214-522-4945 PREPARED BY

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

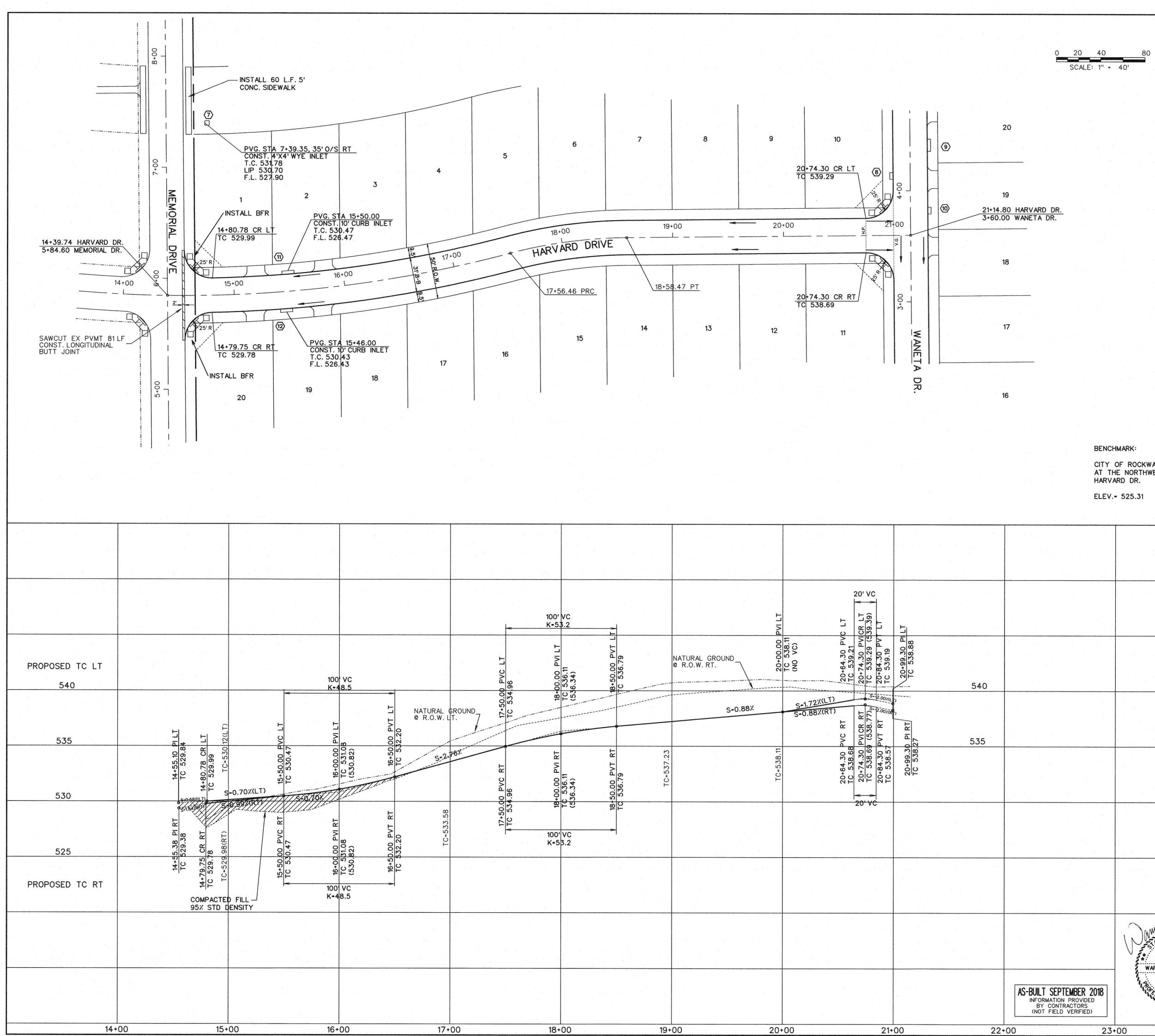
OCTOBER 2017

CASE NO. P2017-023

SHEET 2 OF 2

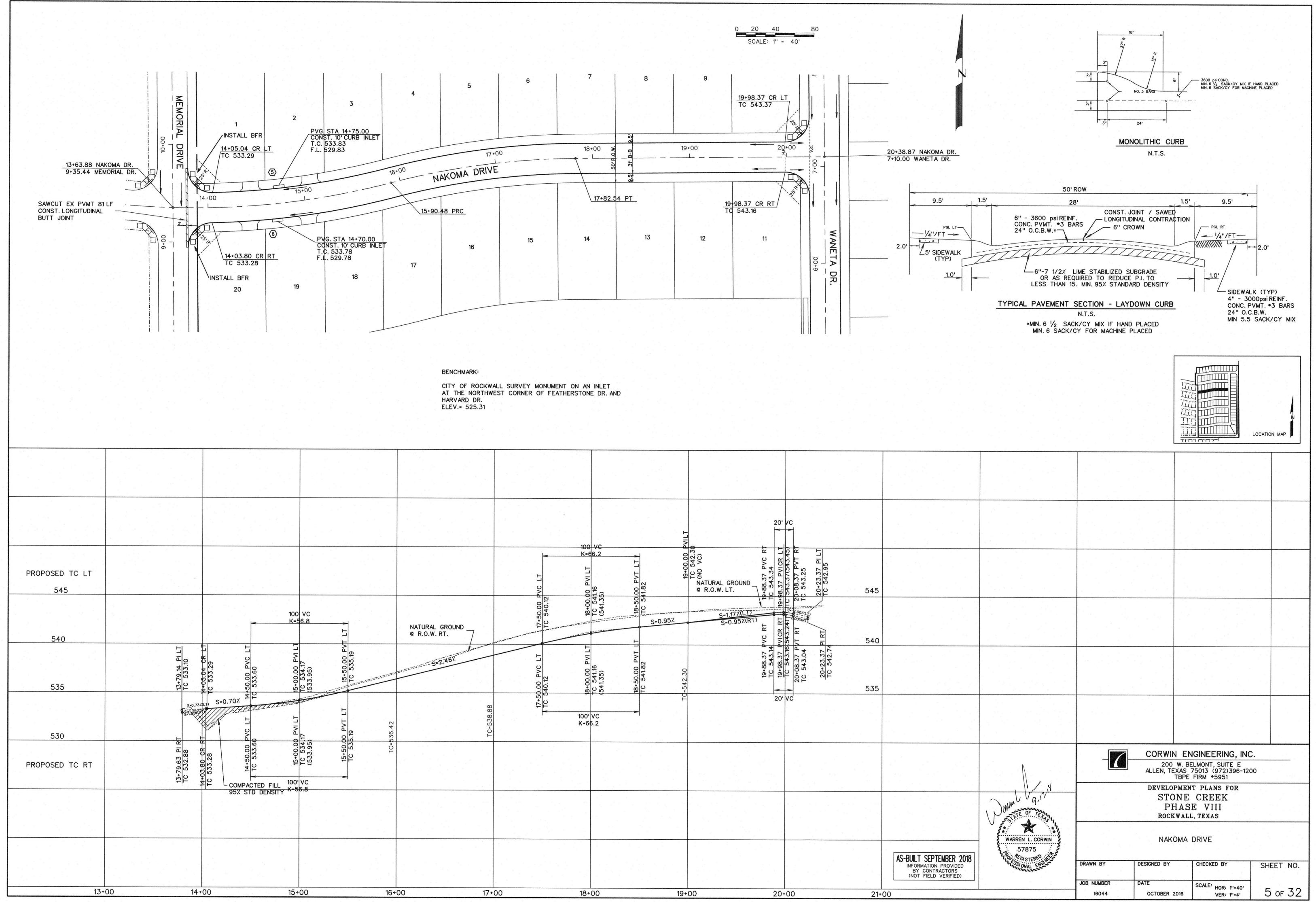


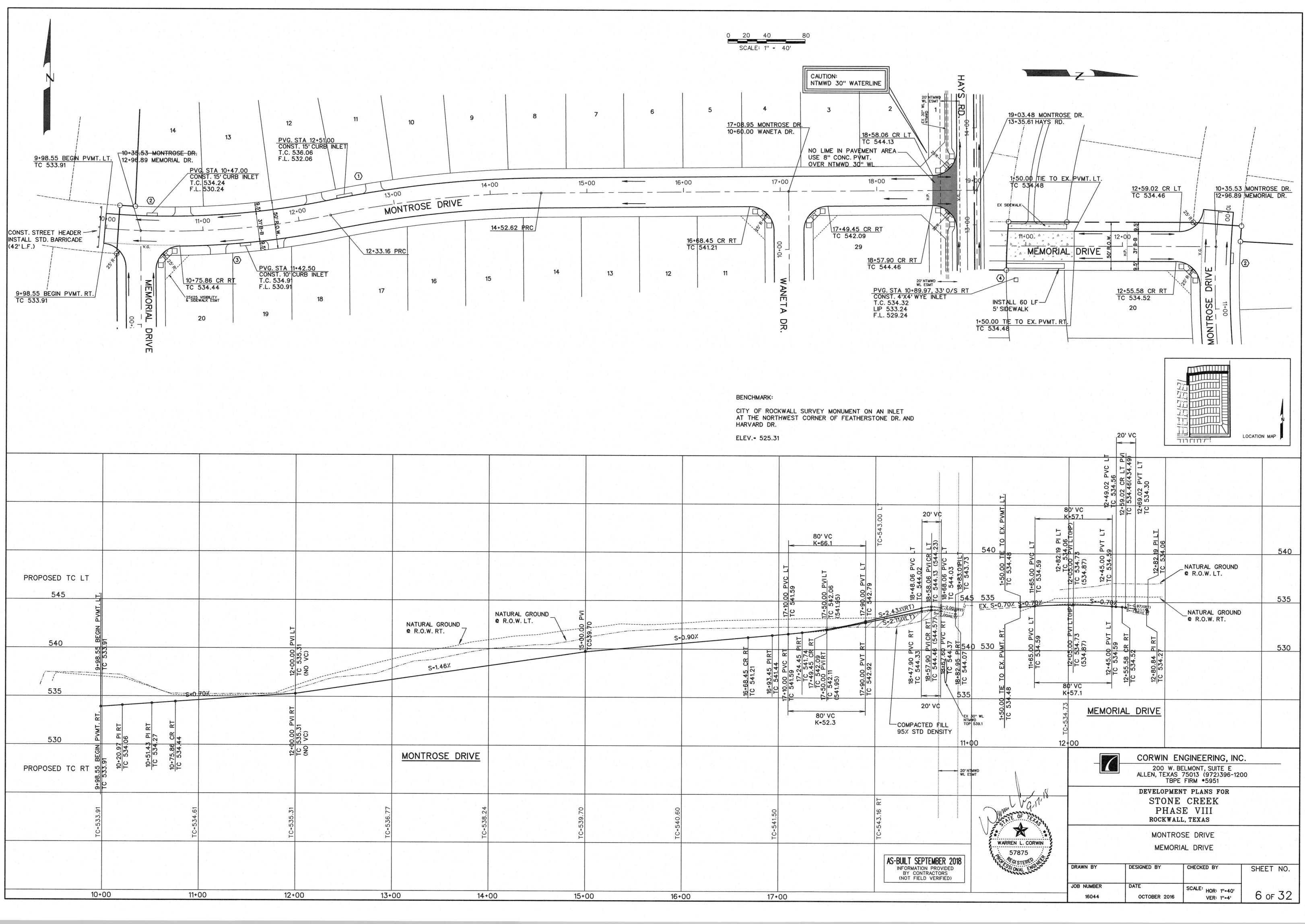
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|  |                                 |   |   |                      |
|  |                                 | 200 W. BE<br>ALLEN, TEXAS<br>TBPE<br>DEVELOPMEN | IGINEERING, INC<br>LMONT, SUITE E<br>75013 (972)396-120<br>FIRM *5951<br>T PLANS FOR<br>CREEK |                      |
| BER 2018<br>ROVIDED<br>TORS<br>ERIFIED)<br>18+00 | DRAWN BY<br>JOB NUMBER<br>16044 |   | E VIII<br>., texas  | SHEET NO.<br>3 OF 32 |

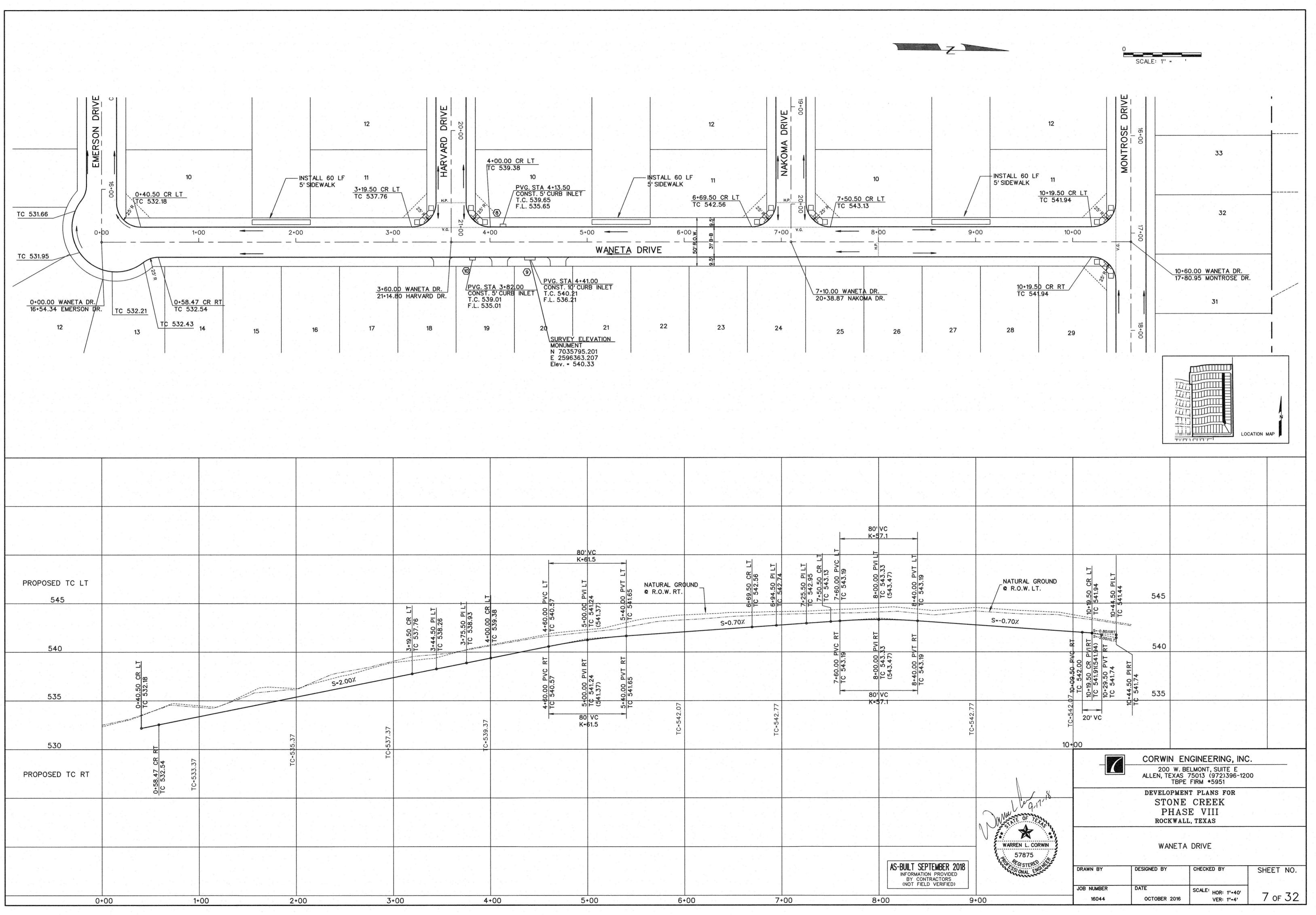


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| F - 20 | (536.34)<br>(536.34) | TC 536.79                           | NATURAL GROUND<br>@ R.O.W. RT.<br>S=0.88% |  | PI RT 20+99.30 PI LT |  |

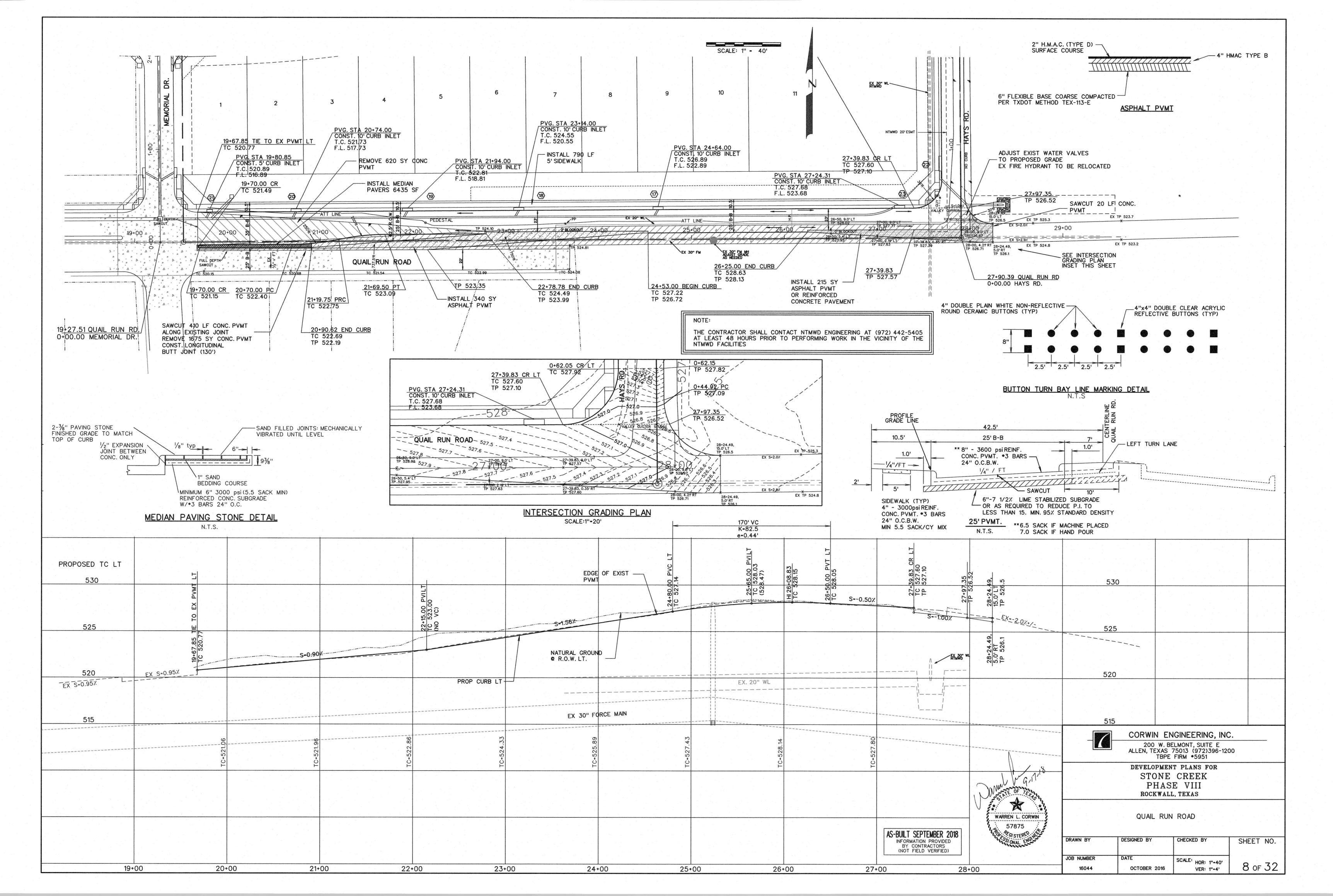
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| AT TH<br>HARVA                        | E NORTHWEST CORNER OF<br>RD DR.<br>525.31                               | FEATHERSTONE DR.    |                                  |  | N<br>OCATION MAP |
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|                                       | DANNE OF FEFT   |                     | STONE                            | CREEK<br>SE VIII   |                  |
| IBER 2018<br>ROVIDED                  | WARREN L. CORWIN<br>57875<br>9: <sup>AC</sup> GI STERED<br>SSI ONAL ENG | DRAWN BY            | HARVAR                           | DRIVE  | SHEET NO.        |
| PROVIDED<br>CTORS<br>(ERIFIED)<br>23+ | 5   | JOB NUMBER<br>16044 | DATE<br>OCTOBER 2016             | SCALE: HOR: 1"-40'<br>VER: 1"-4'   | 4 of 32          |

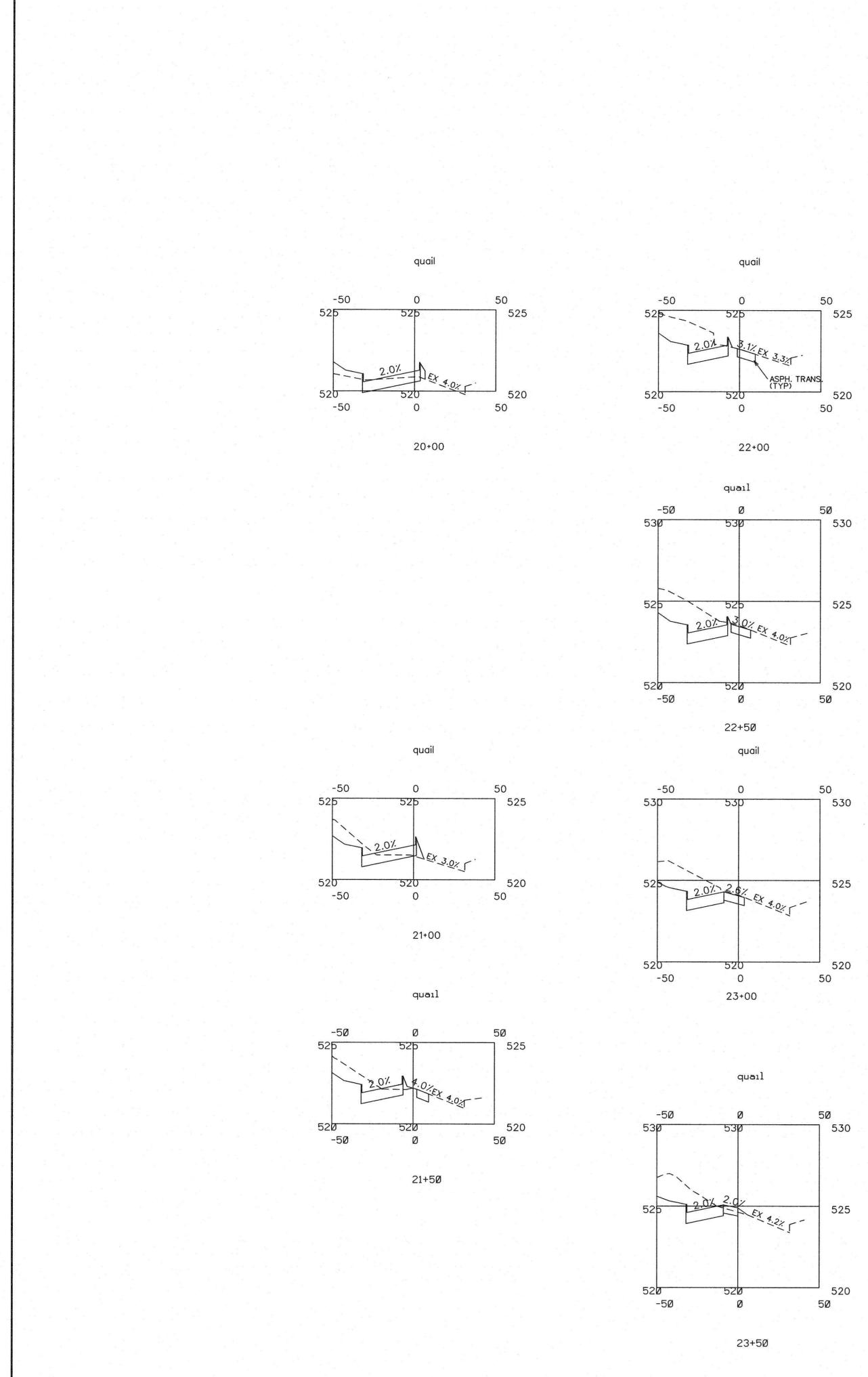




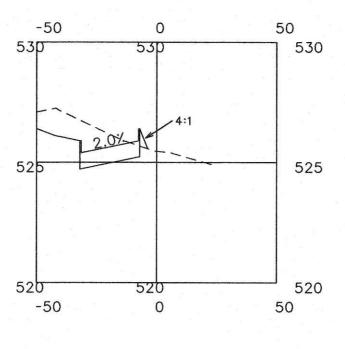


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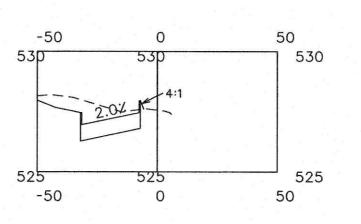


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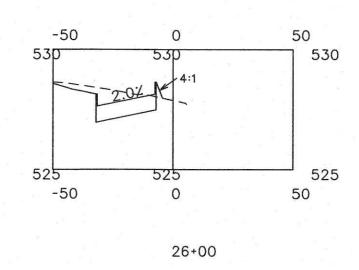
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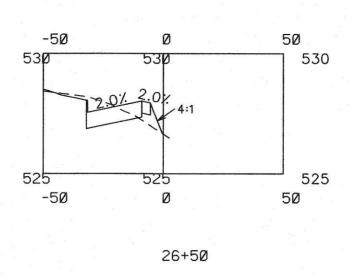


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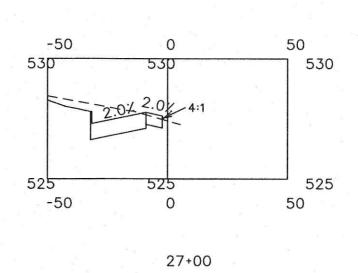
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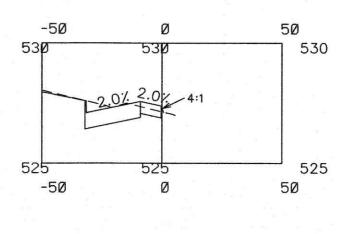




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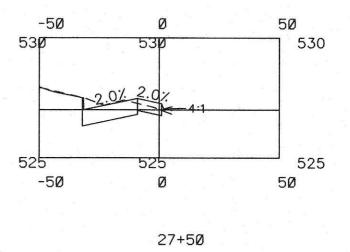


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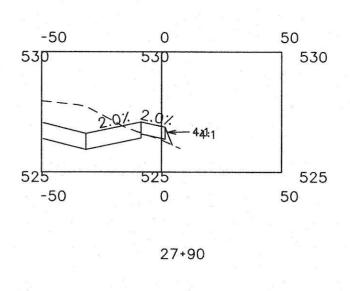


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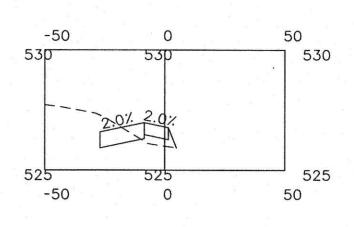
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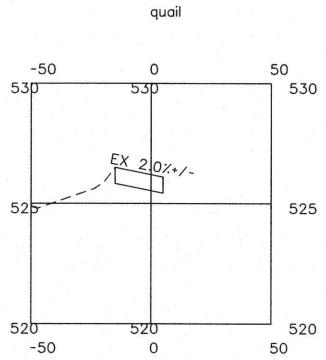
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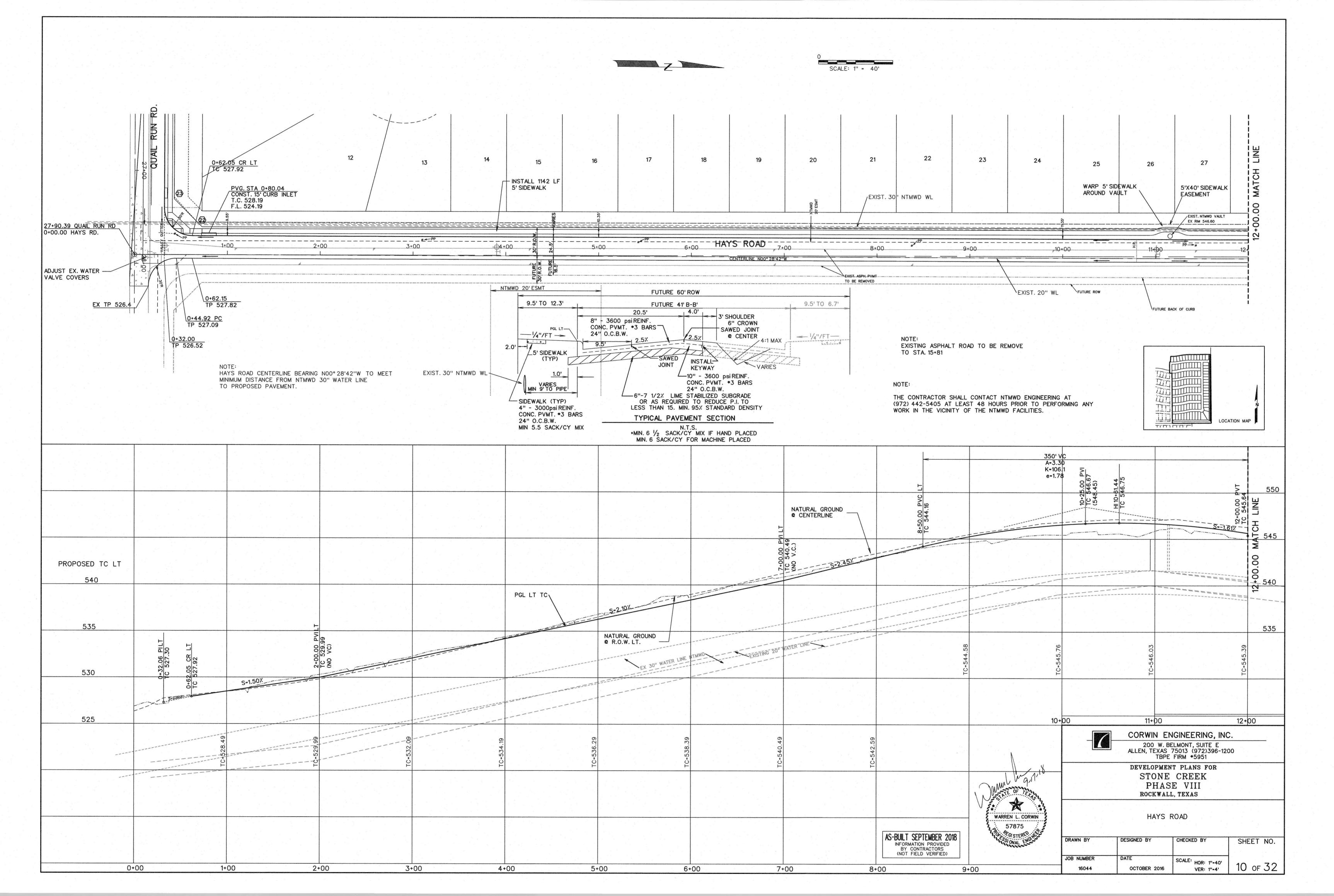


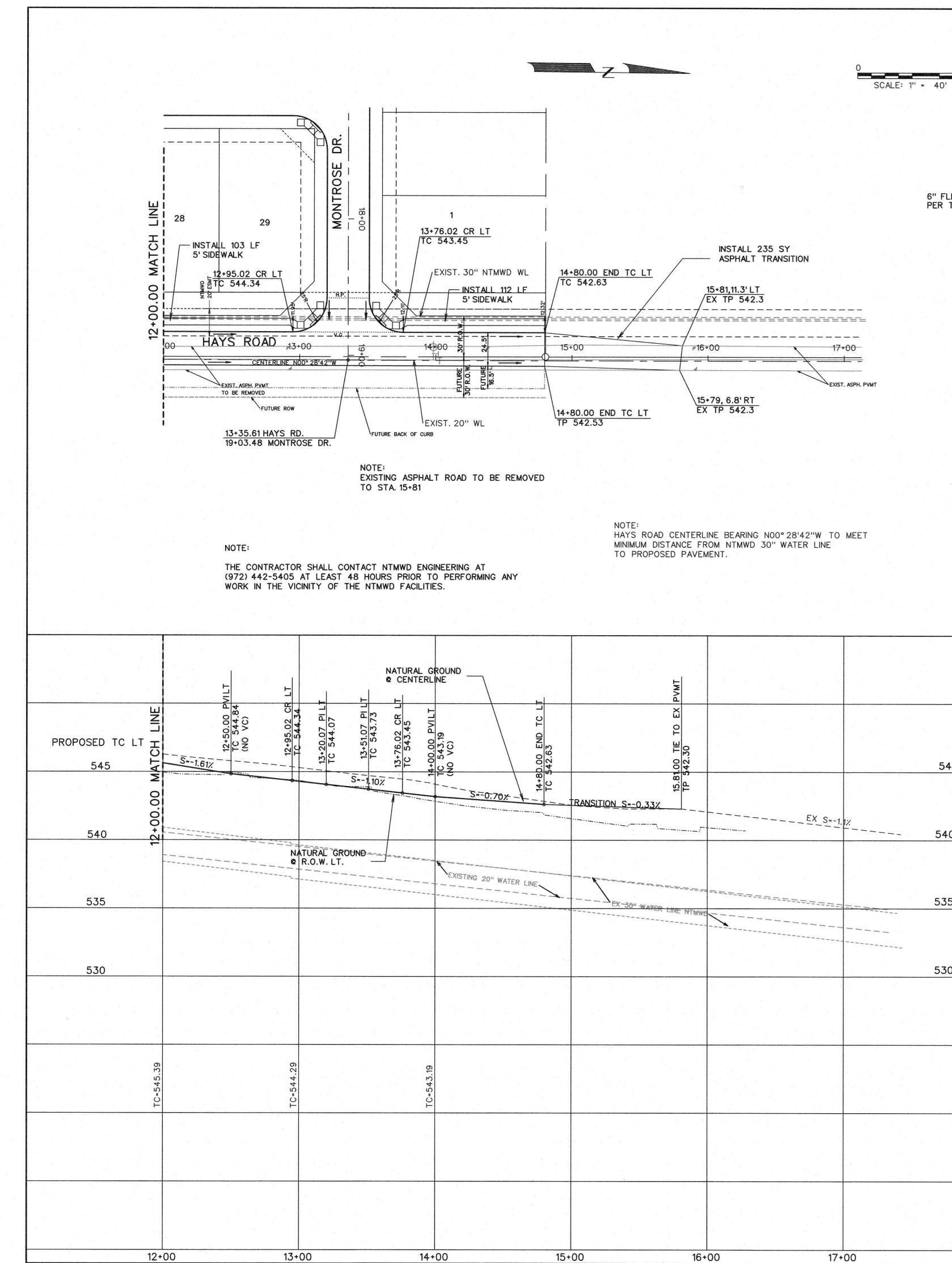




|            | CORWIN        | ENGINEERING, IN   | IC.       |
|------------|---------------|---|-----------|
|            | - ALLEN, TEXA | BELMONT, SUITE E<br>S 75013 (972)396-1<br>PE FIRM *5951 | 200       |
|            | STON<br>PHA   | ent plans for<br>E CREEK<br>SE VIII<br>All, texas       |           |
|            | QUAIL R       | UN ROAD   |           |
|            | CROSS         | SECTIONS  |           |
| DRAWN BY   | DESIGNED BY   | CHECKED BY  | SHEET NO. |
| JOB NUMBER | DATE          | SCALE:  |           |

|                     | CROSS SE             | ECTIONS                          |           |
|---------------------|----------------------|----------------------------------|-----------|
| DRAWN BY            | DESIGNED BY          | CHECKED BY                       | SHEET NO. |
| JOB NUMBER<br>16044 | DATE<br>OCTOBER 2016 | SCALE: HOR: 1"=40'<br>VER: 1"=4' | 9 of 32   |

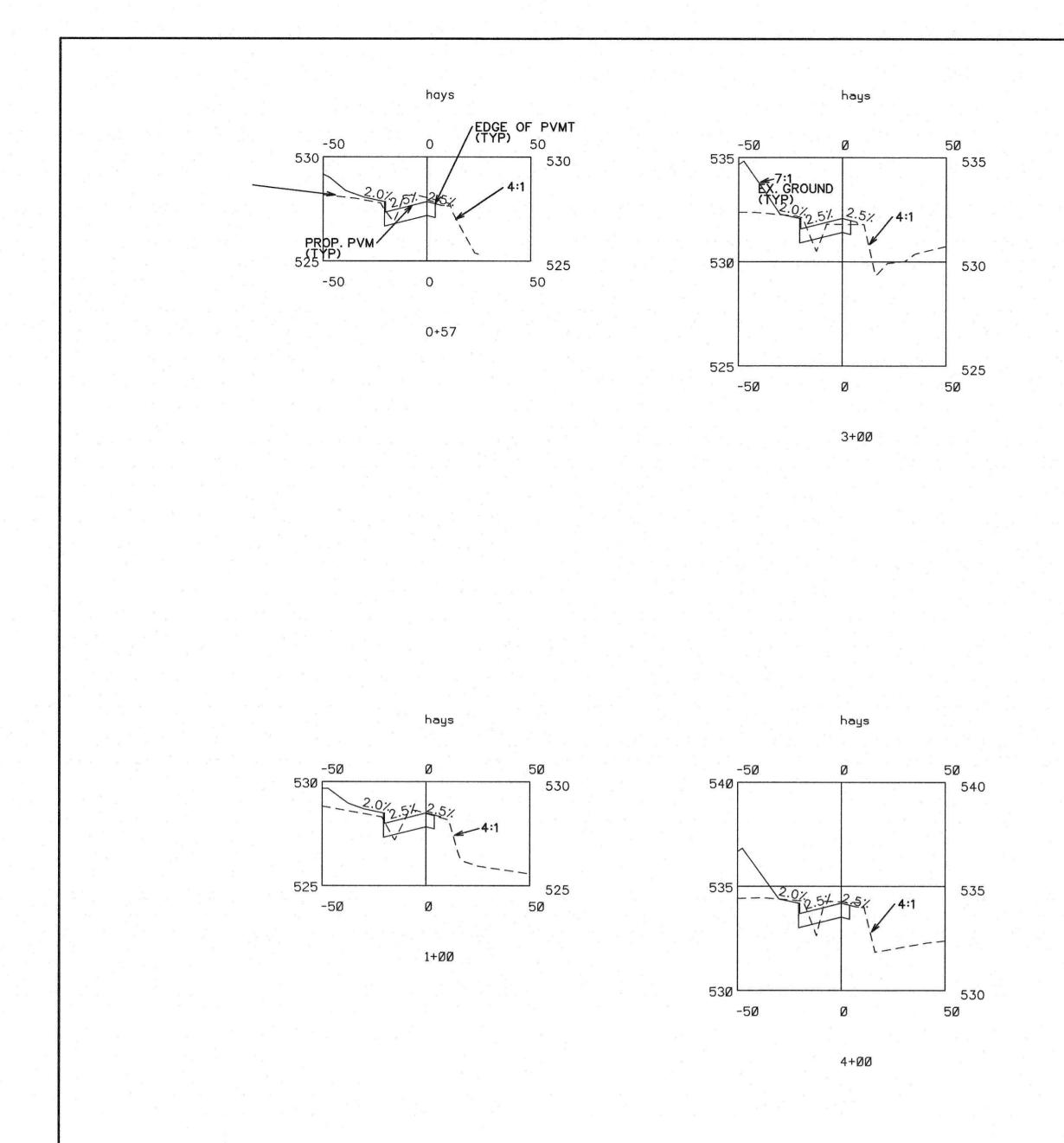


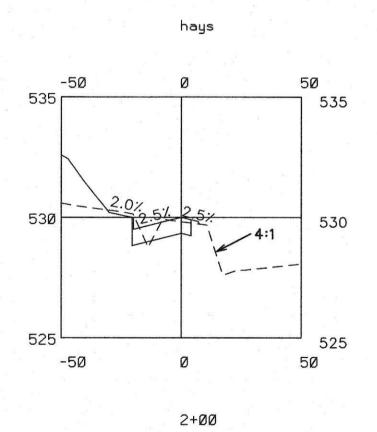


|                                   |      | 530         |  |  |
|-----------------------------------|------|-------------|--|--|
| WATER LINE NTMW                   |      | 535         |  |  |
| .33%                              | EX_S | 5=-1.1% 540 |  |  |
| 15.81.00 TIE TO EX F<br>TP 542.30 |      | 545         |  |  |
| PVMT                              |      |             |  |  |

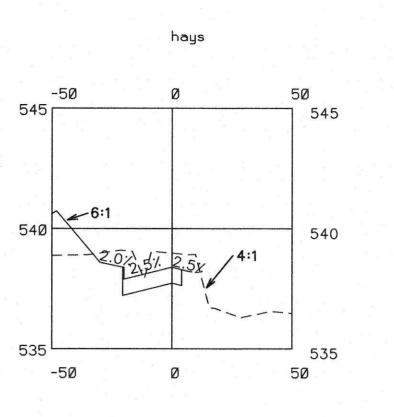
| 2" H.M.A.C. (TYPE<br>SURFACE COURSE                     | D) | 4" HMAC TYPE B |
|---|----|----------------|
|   |    |                |
| 6" FLEXIBLE BASE COARSE CO<br>PER TXDOT METHOD TEX-113- |    |                |
|   |    |                |

| g # <sup>4</sup> #                           |  |                     |                              |  |           |
|--|--|---------------------|------------------------------|--|-----------|
|  |  |                     |                              |  |           |
|  |  |                     |                              |  |           |
|  |  |                     |                              |  |           |
|  |  |                     |                              |  |           |
|  |  | -7-                 |                              | GINEERING, INC<br>LMONT, SUITE E<br>75013 (972)396-120<br>FIRM *5951 |           |
|  | Mul 9,17,18  |                     | developmen<br>STONE<br>PHASI | f plans for<br>CREEK<br>E VIII                                       |           |
|  | WARREN L. CORWIN   |                     | ROCKWALL<br>HAYS R           |  |           |
| MBER 2018<br>PROVIDED<br>ACTORS<br>VERIFIED) | 57875<br>Constant and Solution an | DRAWN BY            | DESIGNED BY                  | CHECKED BY   | SHEET NO. |
|  |  | JOB NUMBER<br>16044 | DATE<br>OCTOBER 2016         | SCALE: HOR: 1"-40'<br>VER: 1"-4'                                     | 11 OF 32  |

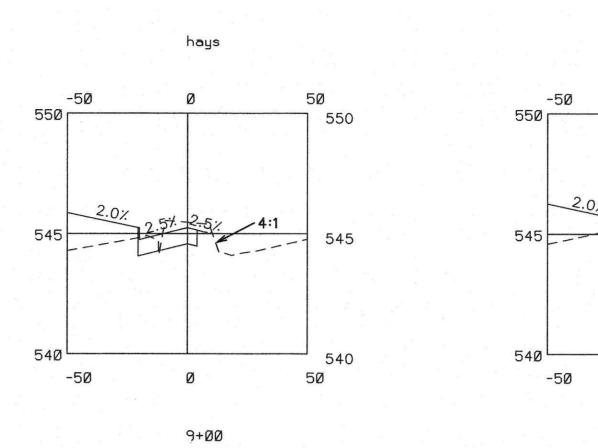




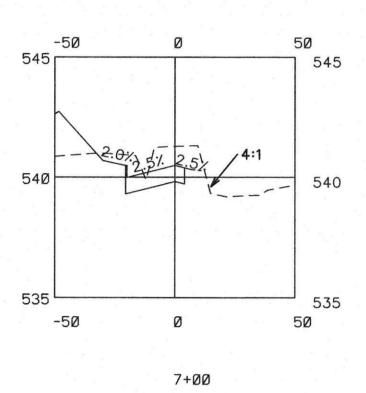
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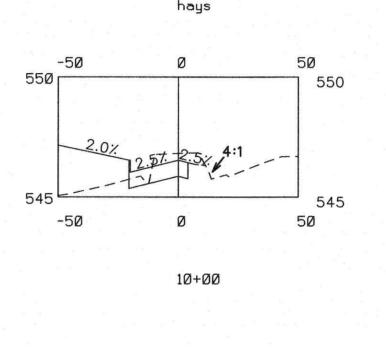


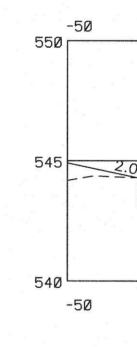
6+ØØ

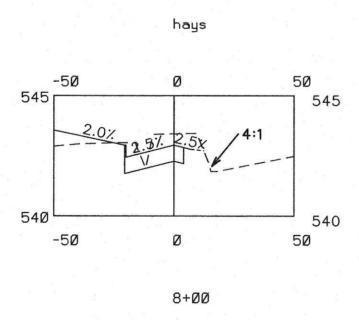


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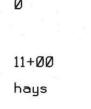


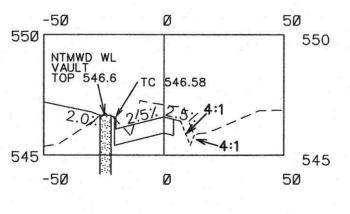




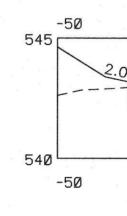


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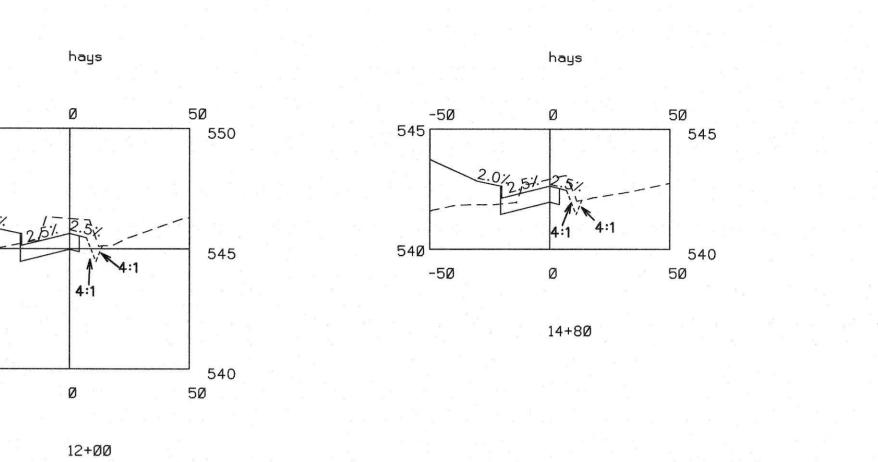


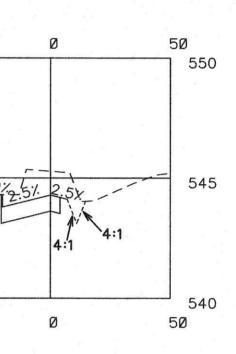


11+16 WATER VAULT



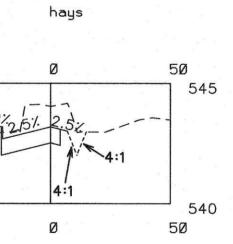
AS-BUILT SEPTEMBER 2018 INFORMATION PROVIDED BY CONTRACTORS (NOT FIELD VERIFIED)



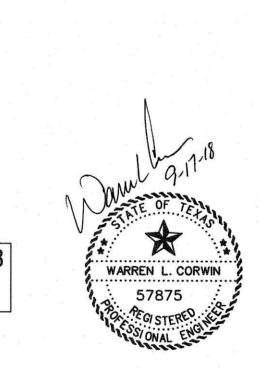


13+ØØ

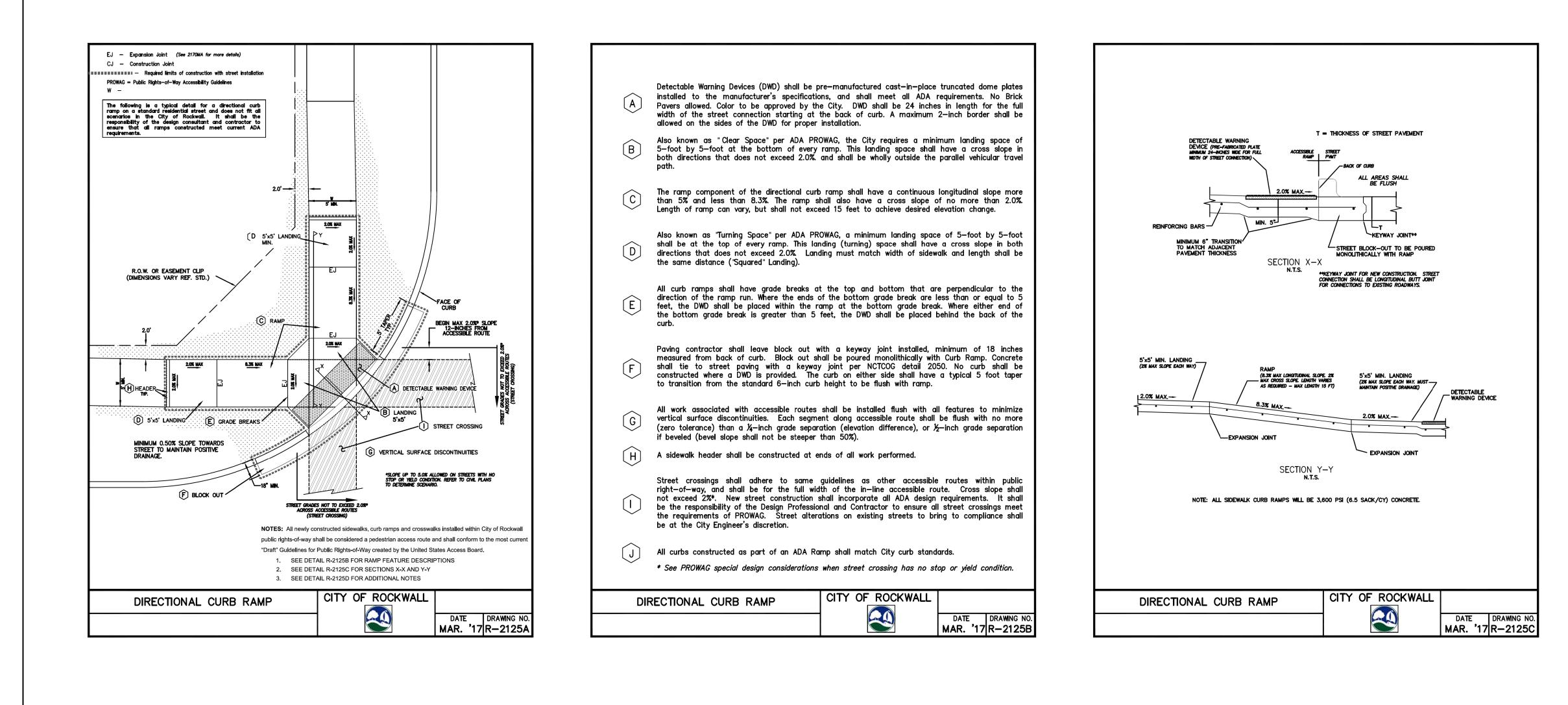
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14+00



|  | CORWIN EN                   | GINEERING, INC                   | ).        |  |  |
|--|-----------------------------|----------------------------------|-----------|--|--|
| 200 W. BELMONT, SUITE E<br>ALLEN, TEXAS 75013 (972)396-1200<br>TBPE FIRM *5951 |                             |                                  |           |  |  |
| DEVELOPMENT PLANS FOR<br>STONE CREEK<br>PHASE VIII<br>ROCKWALL, TEXAS          |                             |                                  |           |  |  |
|  | HAYS ROAD<br>CROSS SECTIONS |                                  |           |  |  |
| DRAWN BY   | DESIGNED BY                 | CHECKED BY                       | SHEET NO. |  |  |
| JOB NUMBER<br>16044  | DATE<br>OCTOBER 2016        | SCALE: HOR: 1"-40'<br>VER: 1"-4' | 12 оғ 32  |  |  |



| c Guidelines for Public Rights<br>RAMPS<br>I slopes shown are <u>MAXIMUM</u><br>andings shall be 5'x 5' m<br>ngitudinal directions<br>ear space at the bottom of<br>thin the crosswalk and wholl<br>aximum allowable cross sloped<br>ditional information on curfle<br>found in the most current<br>3.102. Federal guidelines sh<br>rosswalk dimensions, crosswa<br>the plans. At intersection<br>cressible routes shall align w<br>andrails are not required on<br>rovide a flush transition when<br>creasible routes are conside<br>maximum allowable). Sidew<br>and must follow all applicable<br>(ABLE WARNING DEVICE<br>urb ramps must contain a<br>omes complying with Section<br>djoining surfaces. Furnish<br>arning surfaces. Furnish<br>arning surfaces. Furnish<br>arning surfaces material adjo<br>ans.<br>etectable warning Materials<br>ty. Install products in acco<br>etectable warning surfaces me<br>etectable warning surfaces for<br>etectable wa | M ALLOWABLE.<br>length or grade<br>minimum with<br>of curb ramps<br>Ily outside the<br>be on sidewalk of<br>the on the one<br>talk markings an<br>one where cross<br>with theoretical<br>the curb ramps.<br>ere the curb ramps<br>of the curb ramps.<br>The curb ramps of<br>the full be trunce<br>of and install of<br>the full width<br>et.<br>shall be locate<br>of the full width<br>et.<br>shall be locate<br>of the full width<br>et.<br>shall be locate<br>on the ramp<br>of the solope that<br>urfaces may be<br>at operable part<br>of the public ramp<br>the solope of the solope<br>the full be used<br>in the public ramp<br>of the curb ramp<br>of the curb of the<br>the solope of the solope of the<br>the full be used<br>the full be used<br>the full be used<br>the full be used the solope of the<br>the full be used the full the full the full<br>the full be used the full the full the full the full<br>the full the full the full the full the full the full<br>the full the full the full the full the full the full<br>the full the full | Lesser slopes tile<br>of approach sid<br>a maximum 23<br>s shall be a mini-<br>parallel vehicular<br>and curb ramp si-<br>on, design, light<br>e Texas Accessibi-<br>any conflicts.<br>Ind stop bar locat<br>swalk markings and<br>crosswalks unles<br>mps connect to<br>when longitudinal<br>clongitudinal slop<br>arning surface th<br>e TAS. The sur-<br>an approved cas<br>lored concrete, u<br>cated dome plate<br>anufacturer's spe-<br>sistant and not co-<br>minimum of 24"<br>of the curb ramp<br>ed so that the e<br>o, align the rows<br>and the street. Wh<br>t is less than 5<br>curved along the<br>struct the pedestr<br>shown elsewhere<br>not permitted (1,<br>to maximize ac<br>right of way may<br>er than 5% must  | that will still dra<br>dewalks as direc<br>% slope in the<br>simum of 5'x 5<br>travel path.<br>surfaces is 2%.<br>reflective value<br>sility Standards<br>tions shall be a<br>are not required<br>as otherwise direct<br>the street.<br>slopes are between<br>are deemed<br>hat consists of<br>face must con<br>st—in—place da<br>unless specified<br>es in the color<br>ecifications.<br>allow water to a<br>" in depth in<br>p or landing whe<br>edge nearest the<br>of domes to be<br>here detectable<br>percent, dome<br>e corner radius.<br>destrian push the<br>fied in TAS 308<br>controller boxes<br>rian access rour<br>in the plans.<br>/2 inch with be<br>cressibility. The<br>y follow the gra | ain properly should<br>ted.<br>The transverse and<br>5' wholly contained<br>a and texture may<br>(TAS) and 16 TAC<br>as shown elsewhere<br>d, curb ramps and<br>ected.<br>Ween 5% and 8.3%<br>accessible routes<br>f raised truncated<br>thrast visually with<br>accumulate.<br>the direction of<br>the direction is less<br>orientation is less<br>buttons. Operable<br>3.<br>s, signs, drainage<br>te or clear ground<br>evel).<br>running slope of<br>ade of the parallel<br>handrails may be   |
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| e used. Adjust curb ramp I<br>andings shall be 5'x 5' m<br>ngitudinal directions<br>ear space at the bottom of<br>thin the crosswalk and wholl<br>aximum allowable cross slope<br>diditional information on curf<br>e found in the most current<br>3.102. Federal guidelines sh<br>rosswalk dimensions, crosswa<br>the plans. At intersection<br>ccessible routes shall align w<br>andrails are not required on<br>rovide a flush transition whe<br>ccessible routes are conside<br>maximum allowable). Sidew<br>and must follow all applicable<br>TABLE WARNING DEVICE<br>urb ramps must contain a<br>omes complying with Section<br>djoining surfaces. Furnish<br>arning surfaces. Furnish<br>arning surfaces. Furnish<br>arning surfaces material adjo<br>ans.<br>etectable warning surfaces m<br>etectable warning surfaces m<br>etectable warning surfaces m<br>etectable warning surfaces m<br>etectable warning surfaces of<br>the provided on a surface wit<br>itical. Detectable warning sur-<br>ace traffic signal or illumi<br>collities and other items so<br>pace.<br>the least possible grade sho<br>dewalks and crosswalks with<br>adway. Where a continuous<br>estirable to improve accessib  | length or grade<br>minimum with<br>of curb ramps<br>Ily outside the<br>be on sidewalk of<br>rb ramp location<br>t edition of the<br>nall supersede of<br>alk markings an<br>ins where cross<br>with theoretical<br>of curb ramps.<br>ere the curb ramps<br>ered "ramps" with<br>valks under 5%<br>e guidelines.<br>In detectable word<br>on 705 of the<br>of and install of<br>gacent to uncol<br>shall be trunc<br>ordance with mo-<br>must be slip res-<br>shall be locate<br>ed on the ramp<br>e ramp run an<br>the full width<br>et.<br>shall be locate<br>ed on the ramp<br>e ramp run an<br>th a slope that<br>urfaces may be<br>at operable par<br>one or more rea-<br>nination poles,<br>as not to obst<br>es shall be as a<br>1/4 inch are no<br>ould be used<br>hin the public re-<br>s grade greated<br>bility. Handrails   | e of approach sid<br>a maximum 25<br>s shall be a mini<br>parallel vehicular<br>and curb ramp si<br>on, design, light<br>e Texas Accessibi<br>any conflicts.<br>Ind stop bar locat<br>swalk markings and<br>crosswalks unles<br>mps connect to<br>then longitudinal<br>clongitudinal slop<br>arning surface th<br>e TAS. The sur-<br>an approved cas<br>lored concrete, u<br>cated dome plate<br>anufacturer's spe-<br>isistant and not co-<br>minimum of 24"<br>of the curb ramp<br>ed so that the e<br>o, align the rows<br>and the street. Wh<br>t is less than 5<br>curved along the<br>struct the pedestr<br>shown elsewhere<br>not permitted (1,<br>to maximize ac<br>right of way may<br>er than 5% must  | dewalks as direc<br>% slope in th<br>himum of 5'x 5<br>travel path.<br>surfaces is 2%.<br>reflective value<br>bility Standards<br>tions shall be a<br>tre not required<br>so otherwise direct<br>the street.<br>slopes are betw<br>pe are deemed<br>hat consists of<br>face must con<br>st—in—place da<br>unless specified<br>es in the color<br>ecifications.<br>allow water to o<br>" in depth in<br>p or landing wh<br>edge nearest th<br>of domes to b<br>here detectable<br>percent, dome<br>e corner radius.<br>destrian push the<br>fied in TAS 308<br>controller boxes<br>rian access rour<br>in the plans.<br>/2 inch with be<br>cressibility. The<br>y follow the gro                            | eted.<br>are transverse and<br>5' wholly contained<br>are and texture may<br>(TAS) and 16 TAC<br>as shown elsewhere<br>d, curb ramps and<br>ected.<br>ween 5% and 8.3%<br>accessible routes<br>f raised truncated<br>htrast visually with<br>accessible routes<br>f elsewhere in the<br>accumulate.<br>the direction of<br>he curb line is at<br>be perpendicular to<br>e warning surfaces<br>orientation is less<br>buttons. Operable<br>3.<br>s, signs, drainage<br>te or clear ground<br>evel).<br>running slope of<br>ade of the parallel<br>handrails may be   |
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| etectable warning surfaces a<br>te back of curb. When place<br>te grade break between the<br>re provided on a surface wit<br>itical. Detectable warning su<br>ALKS<br>rovide clear ground space of<br>arts shall be placed within o<br>ace traffic signal or illumi<br>icilities and other items so<br>bace.<br>treet grades and cross slope<br>hanges in level greater than<br>he least possible grade sha<br>dewalks and crosswalks with<br>adway. Where a continuous<br>esirable to improve accessib   | shall be locate<br>ed on the ramp<br>e ramp run an<br>ith a slope that<br>urfaces may be<br>at operable pan<br>one or more rea<br>nination poles,<br>as not to obst<br>es shall be as<br>1/4 inch are n<br>in the public r<br>s grade greate<br>bility. Handrails  | b, align the rows<br>and the street. Wh<br>t is less than 5<br>curved along the<br>act, including peo-<br>ach ranges specifi<br>ground boxes, of<br>truct the pedestr<br>shown elsewhere<br>not permitted (1,<br>to maximize ac<br>right of way may<br>er than 5% must   | of domes to b<br>here detectable<br>percent, dome<br>e corner radius.<br>destrian push b<br>fied in TAS 308<br>controller boxes<br>rian access rou<br>in the plans.<br>/2 inch with be<br>ccessibility. The<br>y follow the gro  | be perpendicular to<br>e warning surfaces<br>orientation is less<br>buttons. Operable<br>3.<br>s, signs, drainage<br>te or clear ground<br>evel).<br>running slope of<br>ade of the parallel<br>handrails may be   |
| ALKS<br>rovide clear ground space of<br>arts shall be placed within o<br>ace traffic signal or illumi<br>icilities and other items so<br>bace.<br>treet grades and cross slope<br>hanges in level greater than<br>he least possible grade sha<br>dewalks and crosswalks with<br>adway. Where a continuous<br>esirable to improve accessib   | at operable par<br>one or more rea<br>nination poles,<br>as not to obst<br>es shall be as<br>1/4 inch are n<br>nould be used<br>hin the public r<br>s grade greated<br>bility. Handrails   | arts, including peo<br>ach ranges specif<br>ground boxes, of<br>truct the pedestr<br>shown elsewhere<br>not permitted (1,<br>to maximize ac<br>right of way may<br>er than 5% must   | destrian push t<br>ified in TAS 308<br>controller boxes<br>rian access rou<br>in the plans.<br>/2 inch with be<br>ccessibility. The<br>y follow the gro  | buttons. Operable<br>3.<br>Is, signs, drainage<br>Ite or clear ground<br>evel).<br>running slope of<br>ade of the parallel<br>handrails may be   |
| arts shall be placed within o<br>ace traffic signal or illumi<br>ocilities and other items so<br>bace.<br>treet grades and cross slope<br>nanges in level greater than<br>ne least possible grade sha<br>dewalks and crosswalks with<br>adway. Where a continuous<br>esirable to improve accessib   | one or more rea<br>nination poles,<br>as not to obst<br>es shall be as<br>n 1/4 inch are n<br>nould be used<br>hin the public r<br>s grade greate<br>bility. Handrails   | ach ranges specif<br>ground boxes, of<br>truct the pedestr<br>shown elsewhere<br>not permitted (1,<br>to maximize ac<br>right of way may<br>er than 5% must  | ified in TAS 308<br>controller boxe:<br>rian access rour<br>in the plans.<br>/2 inch with be<br>ccessibility. The<br>y follow the gro  | 3.<br>s, signs, drainage<br>te or clear ground<br>evel).<br>running slope of<br>ade of the parallel<br>handrails may be  |
| cilities and other items so<br>bace.<br>treet grades and cross slope<br>hanges in level greater than<br>he least possible grade sho<br>dewalks and crosswalks with<br>adway. Where a continuous<br>esirable to improve accessib   | as not to obst<br>es shall be as<br>n 1/4 inch are n<br>nould be used<br>hin the public r<br>s grade greated<br>bility. Handrails  | truct the pedestr<br>shown elsewhere<br>not permitted (1,<br>to maximize ac<br>right of way may<br>er than 5% must   | rian access rou<br>in the plans.<br>/2 inch with be<br>ccessibility. The<br>y follow the gro   | ite or clear ground<br>evel).<br>running slope of<br>ade of the parallel<br>handrails may be   |
| treet grades and cross slope<br>nanges in level greater than<br>ne least possible grade sha<br>dewalks and crosswalks with<br>badway. Where a continuous<br>esirable to improve accessib  | 1/4 inch are n<br>nould be used<br>hin the public r<br>s grade greate<br>bility. Handrails   | not permitted (1,<br>to maximize ac<br>right of way may<br>er than 5% must   | /2 inch with be<br>ccessibility. The<br>y follow the gro   | running slope of<br>ade of the parallel<br>handrails may be  |
| ne least possible grade sho<br>dewalks and crosswalks with<br>adway. Where a continuous<br>esirable to improve accessib   | iould be used<br>hin the public r<br>s grade greate<br>bility. Handrails   | to maximize ac<br>right of way may<br>er than 5% must  | ccessibility. The<br>y follow the gro  | running slope of<br>ade of the parallel<br>handrails may be  |
|   |  | may also be nee  | eded to protect  | t pedestrians from   |
| andrail extensions shall no   | •  |  |  |  |
|   |  |  | ROCKWALL   | 1  |
| CIIONAL CURB RAM  | <b>л</b> Р   |  |  | DATE DRAWING N   |
|   |  |  |  | MAR. '17 R-2125  |
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|   |  |  |  |  |
|   | landrail extensions shall no<br>bedestrian routes.   | landrail extensions shall not protrude in  | andrail extensions shall not protrude into the usable bedestrian routes.   |  |



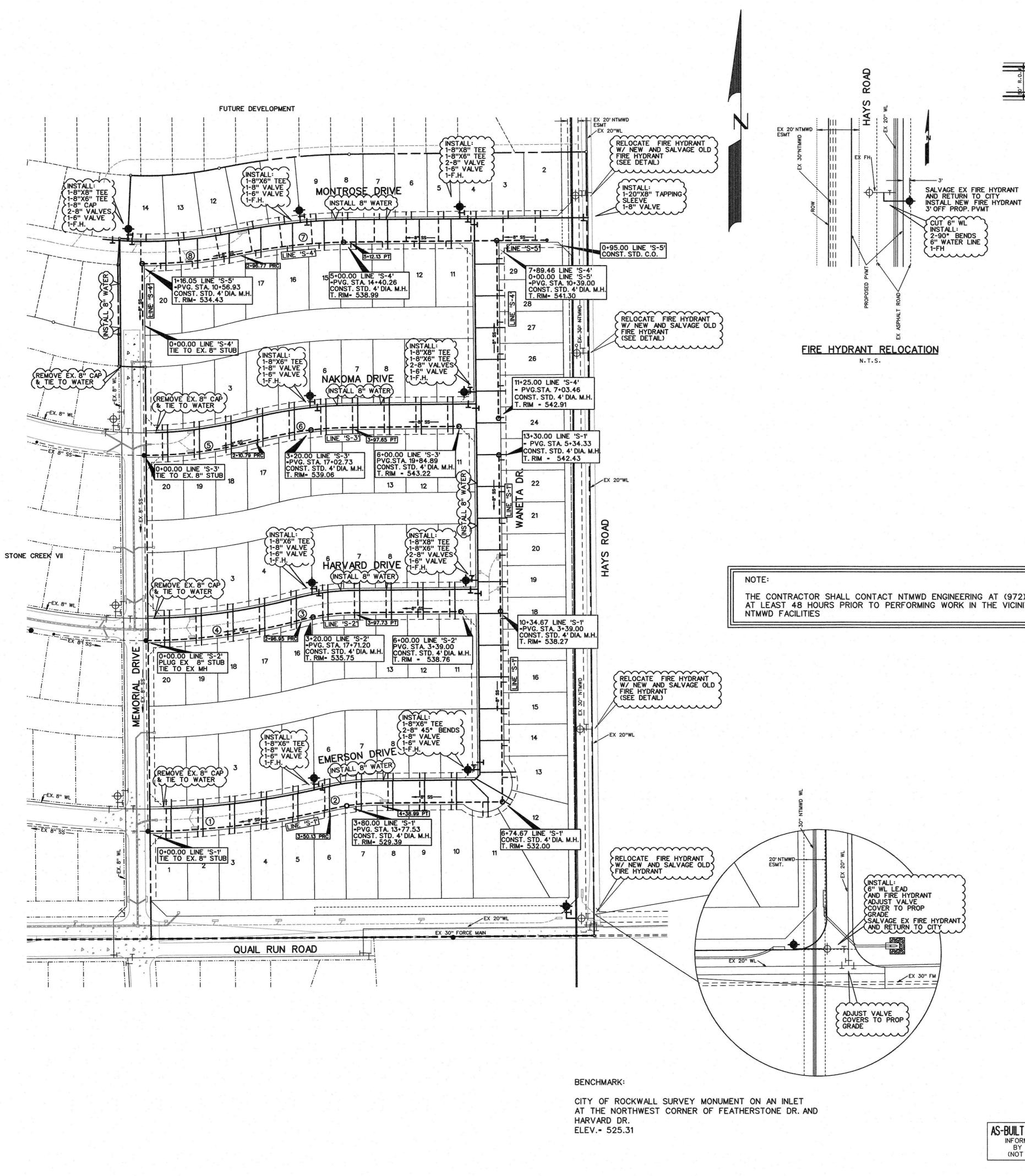
CORWIN ENGINEERING, INC. 200 W. BELMONT, SUITE E ALLEN, TEXAS 75013 (972)396-1200 TBPE FIRM \*5951

DEVELOPMENT PLANS FOR STONE CREEK PHASE VIII ROCKWALL, TEXAS

AS-BUILT SEPTEMBER 2018 INFORMATION PROVIDED BY CONTRACTORS (NOT FIELD VERIFIED)

| SIDEWALK | RAMP | DETAILS |
|----------|------|---------|
|          |      |         |

| DRAWN BY   | DESIGNED BY  | CHECKED BY         | SHEET NO. |
|------------|--------------|--------------------|-----------|
|            |              |                    | SHEET NO. |
|            |              |                    |           |
| JOB NUMBER | DATE         | SCALE: LIGE IN LOL |           |
|            |              | SCALE: HOR: 1"-40' | 12A of 32 |
| 16044      | OCTOBER 2016 | VER: 1''=4'        | IZAUF JZ  |



| F | $\sim$ | F | N  | ſ |
|---|--------|---|----|---|
| _ | C      | L | IV | L |

|          | PROP. WATER LINE              |
|----------|-------------------------------|
| <u>F</u> | PROP. FIRE HYDRANT AND VALVE  |
|          | PROP. GATE VALVE              |
| <b>Ø</b> | PROP. FLUSH VALVE             |
|          | EXIST. WATER LINE             |
| <u>¥</u> | EXIST. FIRE HYDRANT AND VALVE |
|          | PROP. SANITARY SEWER          |
| -0       | PROP. MANHOLE                 |
|          | PROP. CLEANOUT                |
|          | EXIST. SANITARY SEWER         |
|          | EXIST. MANHOLE                |
|          | PROP. STORM SEWER             |
|          | PROP. CURB INLETS             |
| Ø        | PROP. CONC. HEADWALL          |
|          |                               |

|                 | 15<br>WATER SEI | 14<br>RV | 13                             | 12<br>SAN. SWR SERV                 | 11<br>Water Line |  |
|-----------------|-----------------|----------|--------------------------------|-------------------------------------|------------------|--|
| 50' R.O.W<br>25 | Baok of         |          |                                | <u>ow</u>                           | - Sanitary Sewer |  |
|                 | 12              |          | 10                             | 9                                   | - sanitary sewer |  |
| r               |                 |          | LAL WATE<br>ERVICE L<br>N.T.S. | I<br>E <u>R &amp; SEWE</u><br>AYOUT | <u>.R</u>        |  |

| CURVE TABL | E           |          |         |         |
|------------|-------------|----------|---------|---------|
|            |             |          |         |         |
| CURVE NO.  | DELTA       | RADIUS   | LENGTH  | TANGENT |
| 1.         | 13°06′12″   | 1531.00' | 350.13' | 175.83' |
| 2.         | 12°55′19″   | 394.00'  | 88.86'  | 44.62'  |
| 3.         | 14°17'33"   | 404.00'  | 100.78' | 50.65'  |
| 4.         | 14°31′46″   | 1171.00' | 296.95' | 149.28' |
| 5.         | 14° 42' 39" | 821.00'  | 210.79' | 105.98' |
| 6.         | 14°11′56″   | 754.00'  | 186.86' | 93.91'  |
| 7.         | 11°10'37"   | 1104.00' | 215.36' | 108.02' |
| 8.         | 12°14′21″   | 846.00'  | 180.72' | 90.70'  |

| 2) 44 | 42-5 | 405 | - Andrews |
|-------|------|-----|-----------|
| NITY  | OF   | THE | 1000      |
|       |      |     |           |

NOTE: ALL WATER LINES TO BE CLASS 200 PIPE DR-14 C-900. ALL SANITARY SEWER PIPE TO BE SDR 35 FOR 5-10' DEEP AND SDR 26 FOR 10' AND GREATER. INSTALL BLUE "EMS" DISK ON WATER LINE AT EVERY 250' AND CHANGE IN DIRECTION, VALVE, AND SERVICE. INSTALL GREEN "EMS" DISK ON SANITARY SEWER LINE EVERY 250' AND AT EVERY CHANGE IN DIRECTION,

> SERVICE SCHEDULE TYPE SIZE NO

MANHOLE, CLEANOUT, AND SERVICE. ALL MANHOLES TO BE RAVEN EPOXY LINED AND SEALED OR APPROVED EQUAL. TO BE SPARK AND

PRESSURE TESTED.

| 0.2 | ITPE       | SIZE   | NU. |
|-----|------------|--------|-----|
|     | SANITARY   | 4"     | 102 |
| 12  | WATER      | 1''    | 102 |
|     | IRRIGATION | 1 1/2" | xx  |
|     |            |        |     |
|     |            |        |     |
|     |            |        |     |

CORWIN ENGINEERING, INC.

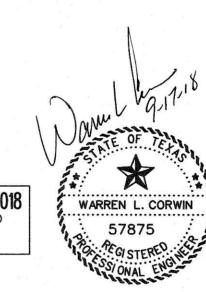
200 W. BELMONT, SUITE E ALLEN, TEXAS 75013 (972)396-1200 TBPE FIRM \*5951

DEVELOPMENT PLANS FOR STONE CREEK PHASE VIII

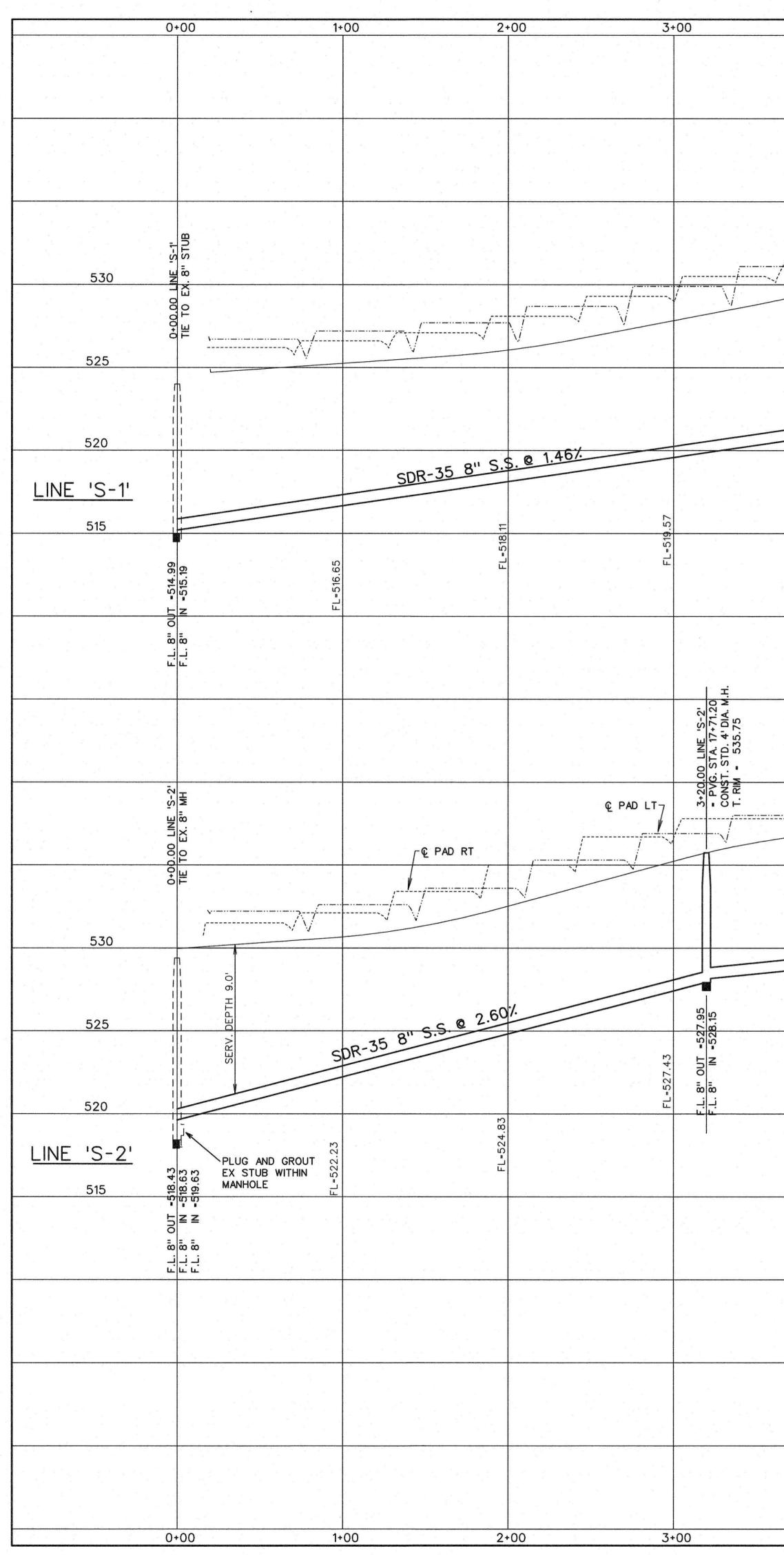
ROCKWALL, TEXAS

WATER AND SANITARY SEWER PLAN

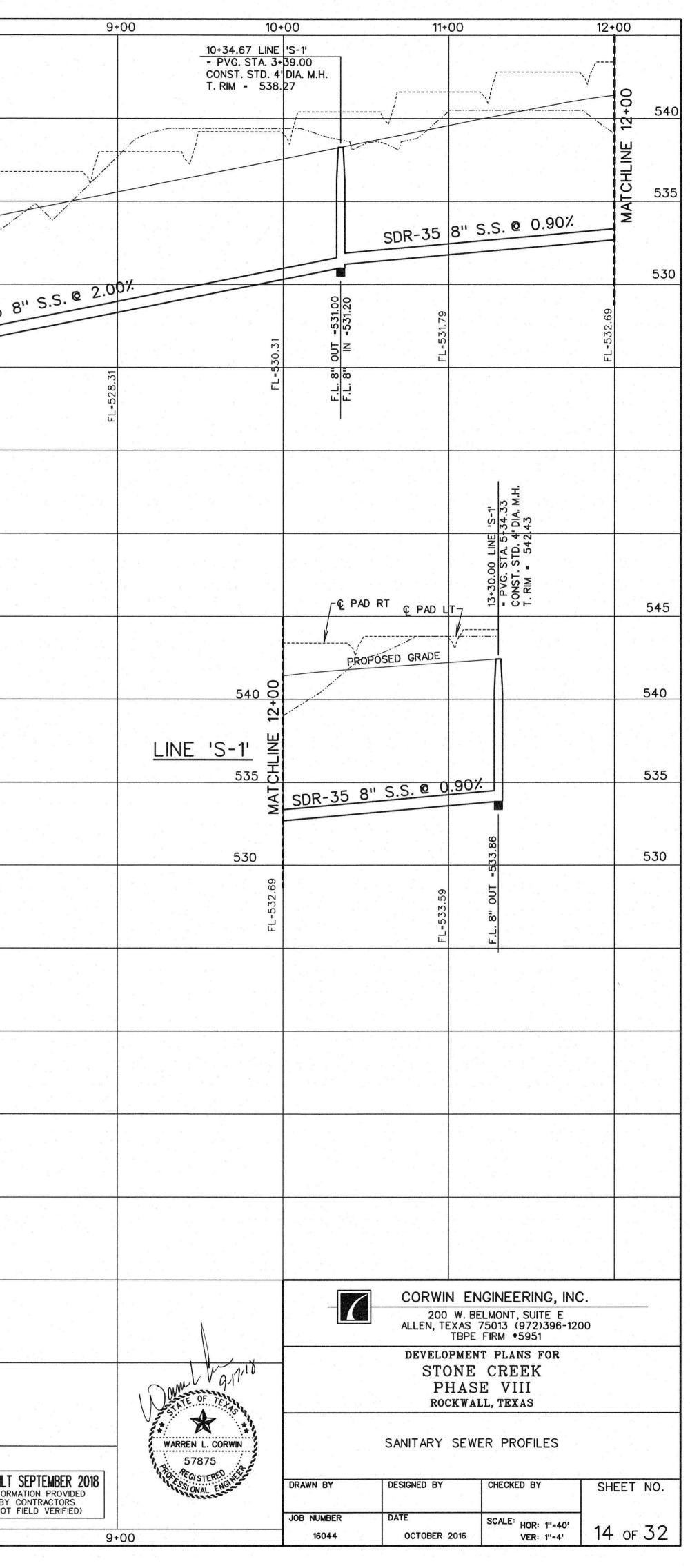
AS-BUILT SEPTEMBER 2018 INFORMATION PROVIDED BY CONTRACTORS (NOT FIELD VERIFIED)

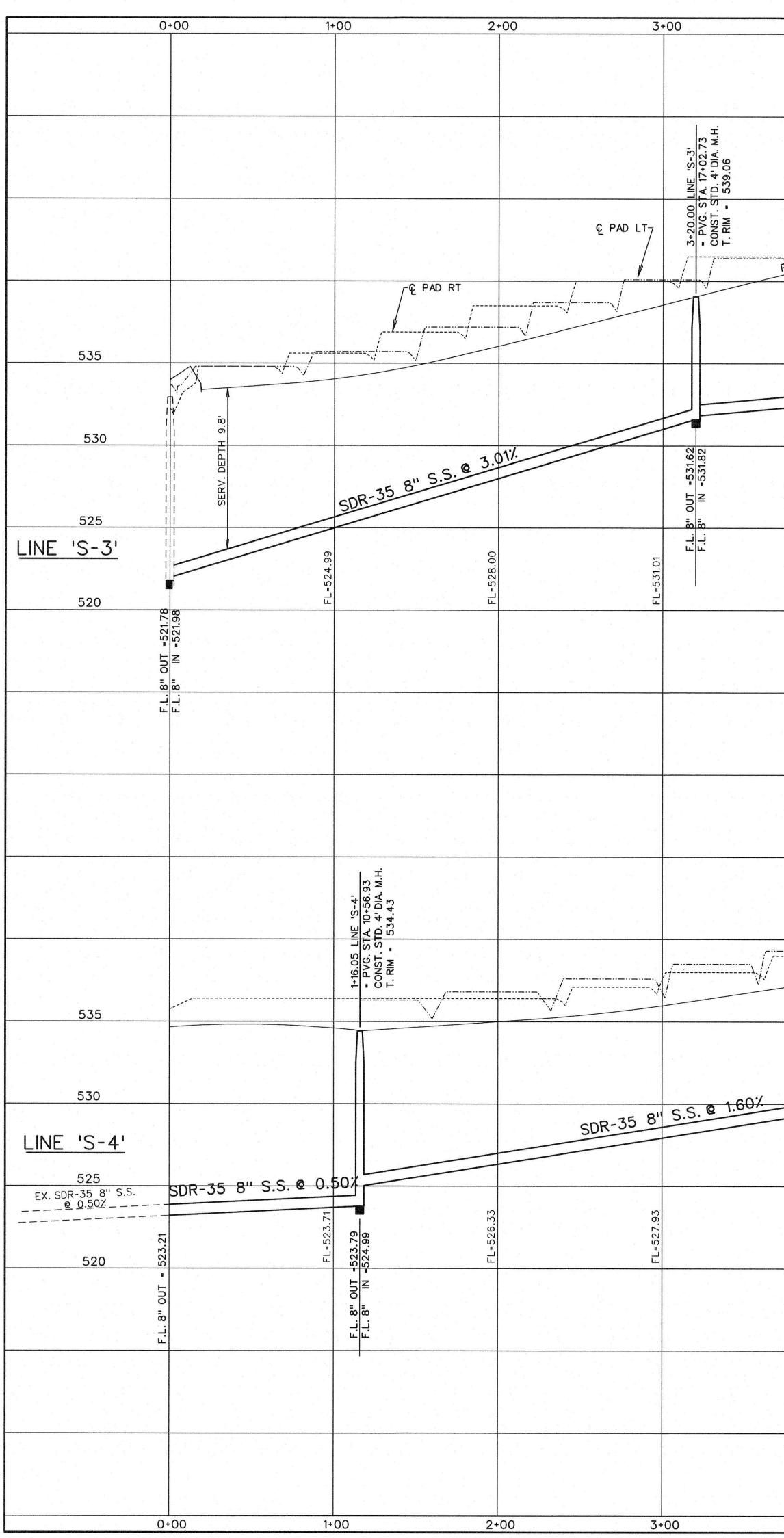


| DRAWN BY   | DESIGNED BY  | CHECKED BY | SHEET NO. |
|------------|--------------|------------|-----------|
| JOB NUMBER | DATE         | SCALE:     |           |
| 16044      | OCTOBER 2016 | 1''=100'   | 13 OF 32  |

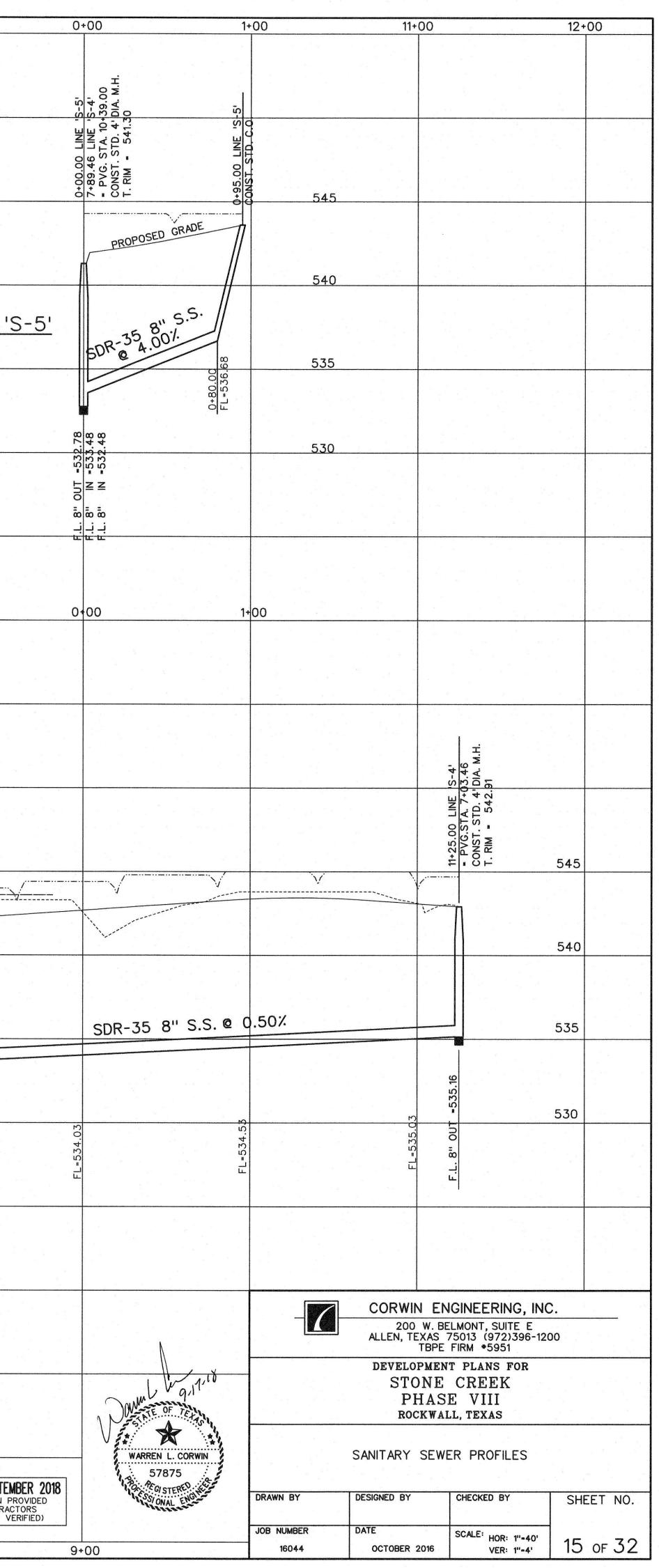


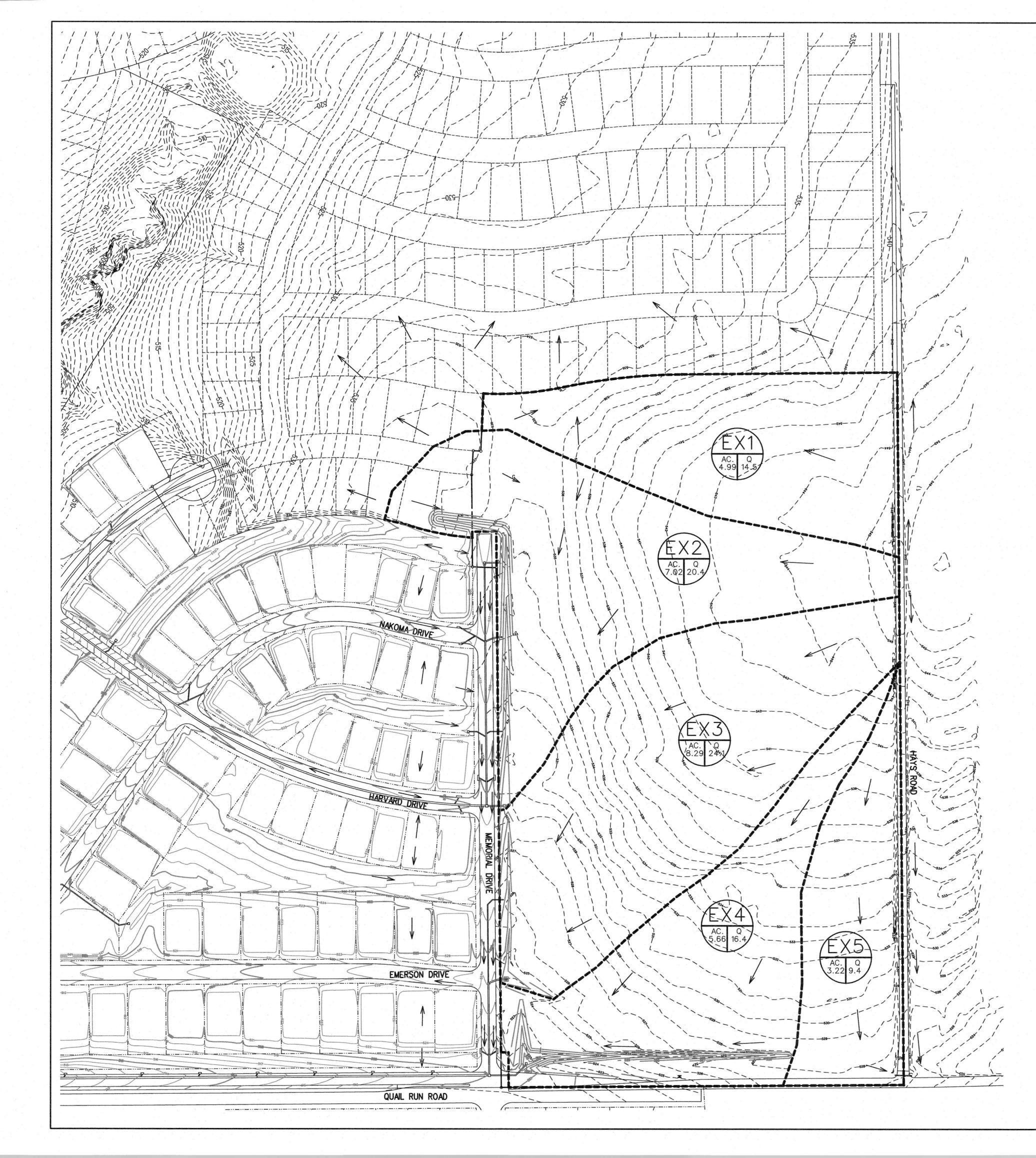
| 4+  | 00 5         | +00 6             | +00 7  | +00 8+  | 00  |
|---|--------------|-------------------|--|---------|---|
|   |              |                   |  |         |   |
|   |              |                   | 6+74.67 LINE 'S-1'<br>CONST. STD. 4' DIA. M.H.<br>T. RIM = 532.00  |         |   |
| 'S-1'<br>5+77.53<br>-' DIA. M.F   |              |                   | 67 LINE<br>T. STD. 4   |         |   |
| 3+80.00 LINE 'S-1'<br>- PVG. STA. 13+77.53<br>CONST. STD. 4' DIA. M.H.<br>T. RIM - 529.39 |              | € PAD LT7         | 6+74.<br>CONS  |         |   |
| 3+80.<br>- PVG<br>CONS  |              |                   |  |         |   |
|   | PROPOSED     | GRADE             |  |         |   |
|   |              |                   |  | S       | DR-35 8" S.   |
|   |              | 5 8" S.S. @ 0.90% |  |         |   |
|   | SDR-3        | 5 8" 5.5. 2       | 80   | =526.31 |   |
| 75<br>95  | 24           |                   | 0UT -523.60<br>IN -523.80  |         |   |
| OUT -520.75<br>IN -520.95<br>FL-521.13  | FL = 522.03  | =<br>522.93       |  |         |   |
| F.L. 8" OUT<br>F.L. 8" N -<br>FL=52   |              |                   |  |         | 5 ° 5   |
|   |              |                   |  |         |   |
|   |              |                   | ŕ  |         |   |
|   |              | S.<br>2           | - PVG. STA. 3+39.00<br>CONST. STD. 4' DIA. M.H.<br>T. RIM - 538.76 |         |   |
|   |              |                   | 6. STA. 3<br>1. STD. 4<br>1. 538                                   |         |   |
|   |              | 00<br>9<br>0      | - PV<br>CONS   | 540     |   |
| PROF  | OSED GRADE   | /                 |  |         |   |
|   |              |                   |  | 535     |   |
|   |              |                   |  |         |   |
|   | SDR-35 8" S. | S. @ 1.007.       |  | 530     |   |
|   |              | 530.95            |  |         |   |
|   |              |                   |  |         | a <sup>B</sup> a a  |
| FL=528.95   | FL=529.95    |                   |  |         |   |
| יי<br>ע<br>ע  | "<br>با      |                   |  |         | اء<br>معرف بينيني معرف معرف                                     |
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|   |              |                   |  |         | AS-BUILT SEPTEN<br>INFORMATION P<br>BY CONTRAC<br>(NOT FIELD VI |
| 4+  | 00 5         | +00 6             | +00 7  | +00 8+  | 00  |

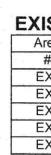




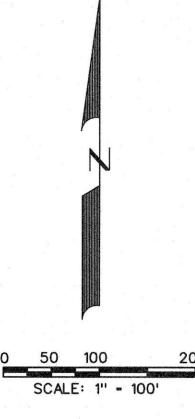
| 4+                                      | •00 5   | +00 6   | +00 7  | +00                         | 8+00  |
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|   |   | 여<br>것-<br>   | - DIA. M<br>- 22<br>- 22   |                             |   |
|   |   |   | 543<br>543<br>543  |                             |   |
|   |   |   | - PVG.STA. 19+84.89<br>CONST. STD. 4' DIA. M.H.<br>T. RIM = 543.22 | 545                         | 545   |
|   |   |   |  | n<br>10 di di<br>10 a tao g | а <sup>н</sup> , , , , , , , , , , , , , , , , , , ,                                      |
| PROPOSE                                 | D GRADE   |   |  | 540                         |   |
|   |   |   |  | 540                         | 540   |
|   |   |   |  |                             | LINE 'S   |
|   | SDR-35 8" 5   | .S. @ 0.90%   |  | 535                         | 535   |
|   |   |   |  |                             |   |
|   |   | 534.34  |  | 530                         | 530   |
| FL=532.54                               | =533.44   | - INO   |  |                             |   |
| FL=5.                                   | ی<br>=<br>لـ  | "8<br>"1  |  |                             |   |
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| а. 3<br>Х. а. 4<br>Х. а. 4              |   |   |  |                             |   |
|   |   |   |  | <u>ц</u>                    | 0+00.00 LINE 'S-5'<br>= PVG. STA. 10+39.00<br>CONST. STD. 4' DIA. M.H.<br>T. RIM = 541.30 |
|   | -4<br>-4  | = PVG. STA. 14+40.26<br>CONST. STD. 4' DIA. M.H.<br>T. RIM = 538.99<br>LU DV<br>DV<br>DV<br>DV<br>DV<br>DV<br>DV<br>DV<br>DV<br>DV<br>DV<br>DV<br>DV<br>D |  |                             | 00 LIN<br>6. STA<br>81. STD<br>81 - 5   |
|   |   | 7A. 14+<br>170. 4'<br>538.9   | E PAD LT7  | 7+80                        |   |
|   | 00.00   |   | /  |                             |   |
|   | ά<br>   |   | PROPOSED GRADE   |                             | Π   |
| × //                                    |   | V.  |  |                             |   |
| 14                                      |   |   |  |                             |   |
|   |   |   |  |                             |   |
| سريم<br>کار کار<br>کار کار              |   | SD  | R-35 8" S.S. @ 0.50;   | •                           |   |
| 0%                                      |   |   |  | 78                          | -533.48<br>-533.48  |
|   | 531.13  | -531.33   | M  |                             |   |
|   | OUT -   | M   | =532.33<br>=   |                             |   |
| 529.53                                  | o co  | <u>ف</u><br>۳<br>۲-<br>۲-   | <u>ــــــــــــــــــــــــــــــــــــ</u>                        |                             |   |
|   |   |   |  |                             | FL=533.53   |
|   |   |   |  |                             |   |
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|   | a a<br>S S A<br>A A<br>A A<br>A A<br>A A<br>A A<br>A A<br>A A<br>A A<br>A |   |  |                             | AS-BUILT SEPTEM<br>INFORMATION PR<br>BY CONTRACT<br>(NOT FIELD VE                         |
| <u> </u>                                | 00 5+   | •00 6+  | •00 7•   | +00                         | 8+00  |
|   |   |   |  |                             |   |











| Area | Area   | Area    | Runoff      |      | Tc    | I(100)  | Q(100) |                |
|------|--------|---------|-------------|------|-------|---------|--------|----------------|
| #    | (sf)   | (acres) | Coefficient | CA   | (min) | (in/hr) | (cfs)  | Drains To:     |
| EX1  | 217491 | 4.99    | 0.35        | 1.75 | 20    | 8.30    | 14.5   | North          |
| EX2  | 305933 | 7.02    | 0.35        | 2.46 | 20    | 8.30    | 20.4   | Harvard Drive  |
| EX3  | 360930 | 8.29    | 0.35        | 2.90 | 20    | 8.30    | 24.1   | Memorial Drive |
| EX4  | 246648 | 5.66    | 0.35        | 1.98 | 20    | 8.30    | 16.4   | Memorial Drive |
| EX5  | 140357 | 3.22    | 0.35        | 1.13 | 20    | 8.30    | 9.4    | Hays Road      |

## LEGEND ----- PROP. STORM SEWER PROP. CURB INLETS É ----- PROP. CONC. HEADWALL EXIST. STORM SEWER Z DRAINAGE AREA DIVIDE ----- FLOW ARROW



DRAINAGE AREA NO.

| -7- | CORWIN ENGINEERING, INC.   |
|-----|--|
|     | 200 W. BELMONT, SUITE E<br>ALLEN, TEXAS 75013 (972)396-1200<br>TBPE FIRM *5951 |

DEVELOPMENT PLANS FOR STONE CREEK PHASE VIII ROCKWALL, TEXAS

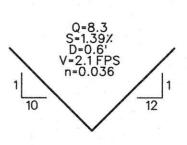


| DRAWN BY            | DESIGNED BY          | CHECKED BY        | SHEET NO. |
|---------------------|----------------------|-------------------|-----------|
| JOB NUMBER<br>16044 | DATE<br>OCTOBER 2016 | SCALE:<br>1"-100' | 16 ог 32  |

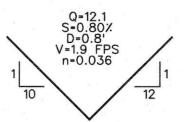
EXISTING CONDITIONS DRAINAGE AREA MAP



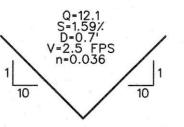
| Area | Area   | Area    | Runoff      | Alexandra and a contract of the second s | Tc    | 1(100)  | Q(100) | 1                   |
|------|--------|---------|-------------|--|-------|---------|--------|---------------------|
| #    | (sf)   | (acres) | Coefficient | CA   | (min) | (in/hr) | (cfs)  | Drains To:          |
| 1    | 90489  | 2.08    | 0.50        | 1.04   | 10    | 9.80    | 10.2   | Inlet 1             |
| 2    | 28609  | 0.66    | 0.50        | 0.33   | 10    | 9.80    | 3.2    | Inlet 2             |
| 3    | 92832  | 2.13    | 0.50        | 1.07   | 10    | 9.80    | 10.4   | Inlet 3             |
| 4    | 106640 | 2.45    | 0.50        | 1.22   | 10    | 9.80    | 12.0   | Inlet 4             |
| 5    | 46032  | 1.06    | 0.50        | 0.53   | 10    | 9.80    | 5.2    | Inlet 5             |
| 6    | 46098  | 1.06    | 0.50        | 0.53   | 10    | 9.80    | 5.2    | Inlet 6             |
| 7    | 107750 | 2.47    | 0.50        | 1.24   | 10    | 9.80    | 12.1   | Inlet 7             |
| 8    | 9600   | 0.22    | 0.50        | 0.11   | 10    | 9.80    | 1.1    | Inlet 8             |
| 9    | 68736  | 1.58    | 0.50        | 0.79   | 10    | 9.80    | 7.7    | Inlet 9             |
| 10   | 10944  | 0.25    | 0.50        | 0.13   | 10    | 9.80    | 1.2    | Inlet 10            |
| 11   | 46114  | 1.06    | 0.50        | 0.53   | 10    | 9.80    | 5.2    | Inlet 11            |
| 12   | 45960  | 1.06    | 0.50        | 0.53   | 10    | 9.80    | 5.2    | Inlet 12            |
| 13   | 72824  | 1.67    | 0.50        | 0.84   | 10    | 9.80    | 8.2    | Inlet 13            |
| 14   | 106847 | 2.45    | 0.50        | 1.23   | 10    | 9.80    | 12.0   | Inlet 14            |
| 15   | 34510  | 0.79    | 0.50        | 0.40   | 10    | 9.80    | 3.9    | Inlet 15            |
| 16   | 97714  | 2.24    | 0.50        | 1.12   | 10    | 9.80    | 11.0   | Inlet 16            |
| 17   | 10875  | 0.25    | 0.90        | 0.22   | 10    | 9.80    | 2.2    | Inlet 17            |
| 17A  | 13005  | 0.30    | 0.50        | 0.15   | 10    | 9.80    | 1.5    | Inlet 17            |
| 18   | 10875  | 0.25    | 0.90        | 0.22   | 10    | 9.80    | 2.2    | Inlet 18            |
| 18A  | 13350  | 0.31    | 0.50        | 0.15   | 10    | 9.80    | 1.5    | Inlet 18            |
| 19   | 8700   | 0.20    | 0.90        | 0.18   | 10    | 9.80    | 1.8    | Inlet 19            |
| 19A  | 10488  | 0.24    | 0.50        | 0.12   | 10    | 9.80    | 1.2    | Inlet 19            |
| 20   | 8700   | 0.20    | 0.90        | 0.18   | 10    | 9.80    | 1.8    | Inlet 20            |
| 20A  | 8858   | 0.20    | 0.50        | 0.10   | 10    | 9.80    | 1.0    | Inlet 20            |
| 21   | 7691   | 0.18    | 0.90        | 0.16   | 10    | 9.80    | 1.6    | Inlet 21            |
| 21A  | 6449   | 0.15    | 0.50        | 0.07   | 10    | 9.80    | 0.7    | Inlet 21            |
| 22   | 57721  | 1.33    | 0.64        | 0.84   | 10    | 9.80    | 8.3    | Inlet 22            |
| 23   | 22285  | 0.51    | 0.90        | 0.46   | 10    | 9.80    | 4.5    | Hays Road           |
| 24   | 20250  | 0.46    | 0.90        | 0.42   | 10    | 9.80    | 4.1    | Hays Road           |
| 25   | 53781  | 1.23    | 0.90        | 1.11   | 10    | 9.80    | 10.9   | Inlet 22            |
| 26   | 9378   | 0.22    | 0.90        | 0.19   | 10    | 9.80    | 1.9    | Inlet 23            |
| 26A  | 9267   | 0.21    | 0.50        | 0.11   | 10    | 9.80    | 1.0    | Inlet 23            |
| 28   | 565263 | 13.0    | 0.50        | 6.49   | 10    | 9.80    | 63.6   | Ultimate to Line D4 |
| 30   | 3418   | 0.08    | 0.90        | 0.07   | 10    | 9.80    | 0.7    | Hays Road           |



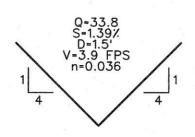
SECTON A-A



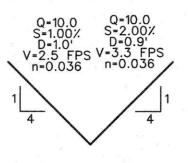
SECTON B-B



SECTON C-C

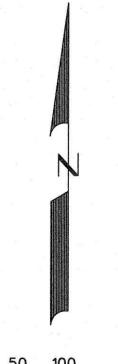


SECTON D-D



SECTON E-E

TYPICAL GRADE TO DRAIN SECTIONS N.T.S.



SCALE: 1" = 100'

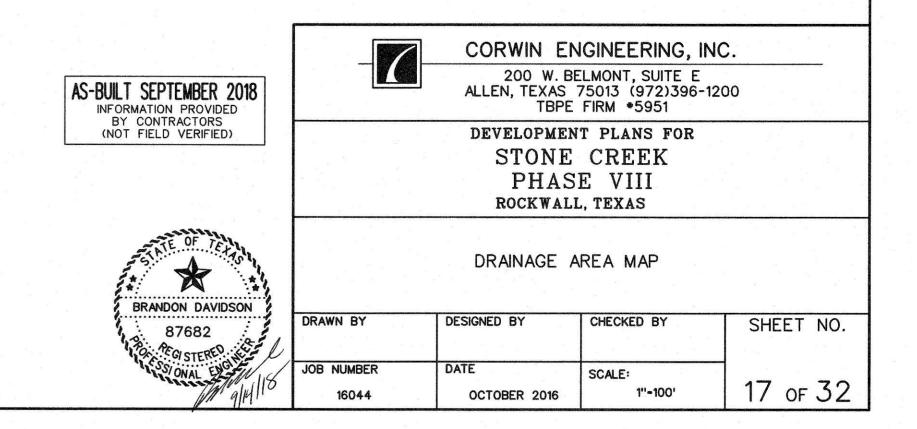
## LEGEND

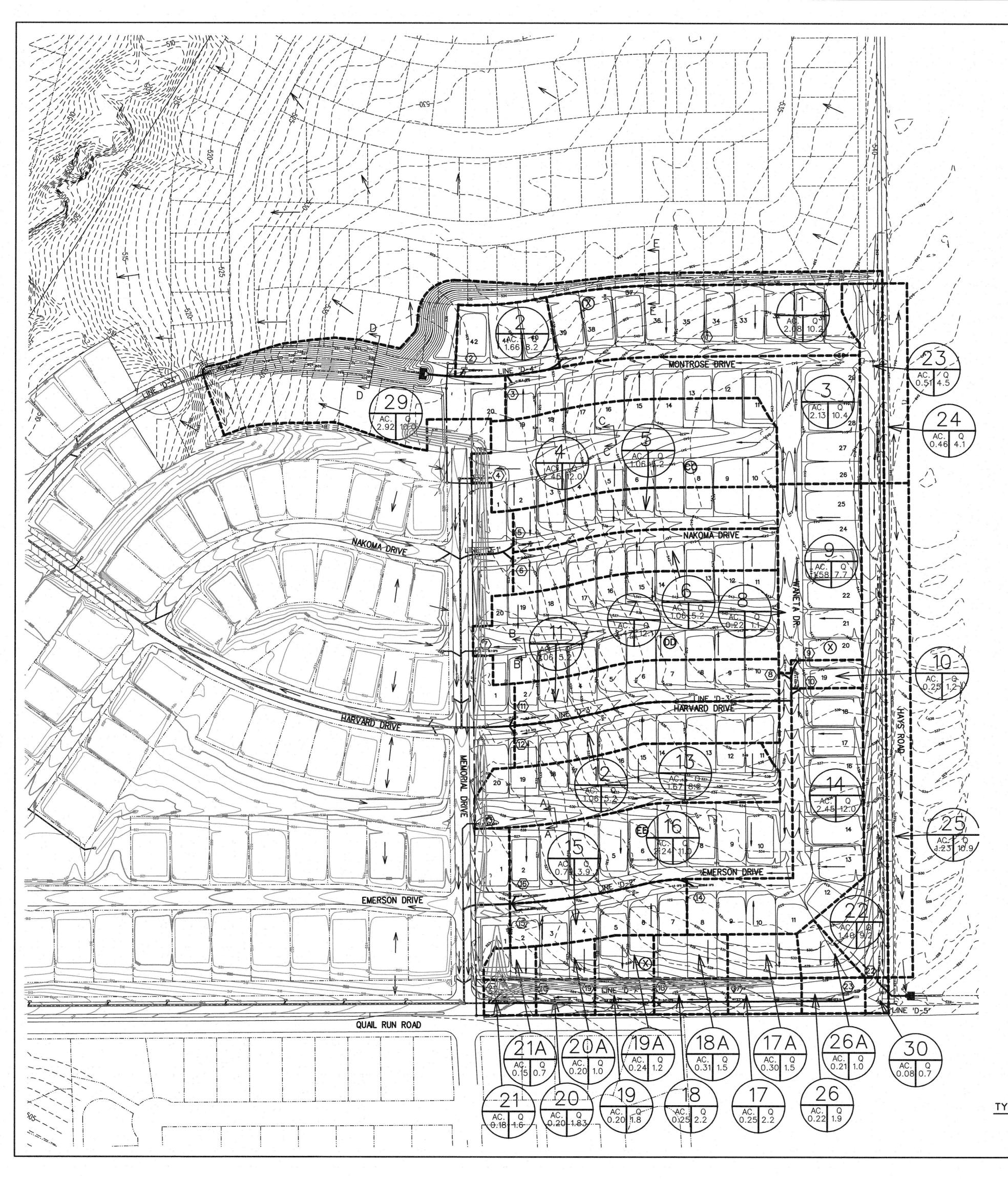
ć Z ------

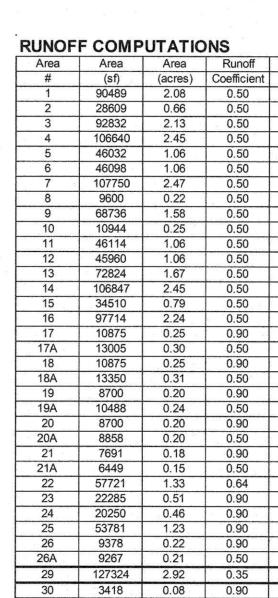
AC. Q

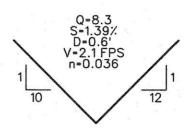
----- PROP. STORM SEWER PROP. CURB INLETS ----- PROP. CONC. HEADWALL EXIST. STORM SEWER DRAINAGE AREA DIVIDE FLOW ARROW

DRAINAGE AREA NO.

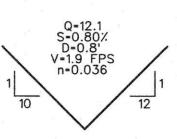


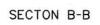


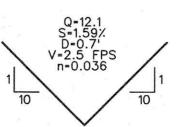




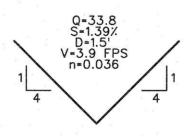
SECTON A-A



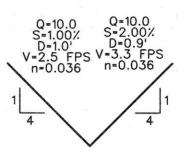




SECTON C-C



SECTON D-D



SECTON E-E

TYPICAL GRADE TO DRAIN SECTIONS N.T.S.

50 100 SCALE: 1" = 100'

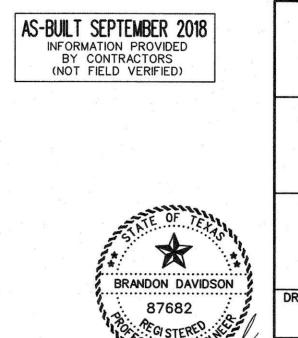
|      | Тс    | I(100)  | Q(100) |                    |
|------|-------|---------|--------|--------------------|
| CA   | (min) | (in/hr) | (cfs)  | Drains To:         |
| 1.04 | 10    | 9.80    | 10.2   | Inlet 1            |
| 0.33 | 10    | 9.80    | 3.2    | Inlet 2            |
| 1.07 | 10    | 9.80    | 10.4   | Inlet 3            |
| 1.22 | 10    | 9.80    | 12.0   | Inlet 4            |
| 0.53 | 10    | 9.80    | 5.2    | Inlet 5            |
| 0.53 | 10    | 9.80    | 5.2    | Inlet 6            |
| 1.24 | 10    | 9.80    | 12.1   | Inlet 7            |
| 0.11 | 10    | 9.80    | 1.1    | Inlet 8            |
| 0.79 | 10    | 9.80    | 7.7    | Inlet 9            |
| 0.13 | 10    | 9.80    | 1.2    | Inlet 10           |
| 0.53 | 10    | 9.80    | 5.2    | Inlet 11           |
| 0.53 | 10    | 9.80    | 5.2    | Inlet 12           |
| 0.84 | 10    | 9.80    | 8.2    | Inlet 13           |
| 1.23 | 10    | 9.80    | 12.0   | Inlet 14           |
| 0.40 | 10    | 9.80    | 3.9    | Inlet 15           |
| 1.12 | 10    | 9.80    | 11.0   | Inlet 16           |
| 0.22 | 10    | 9.80    | 2.2    | Inlet 17           |
| 0.15 | 10    | 9.80    | 1.5    | Inlet 17           |
| 0.22 | 10    | 9.80    | 2.2    | Inlet 18           |
| 0.15 | 10    | 9.80    | 1.5    | Inlet 18           |
| 0.18 | 10    | 9.80    | 1.8    | Inlet 19           |
| 0.12 | 10    | 9.80    | 1.2    | Inlet 19           |
| 0.18 | 10    | 9.80    | 1.8    | Inlet 20           |
| 0.10 | 10    | 9.80    | 1.0    | Inlet 20           |
| 0.16 | 10    | 9.80    | 1.6    | Inlet 21           |
| 0.07 | 10    | 9.80    | 0.7    | Inlet 21           |
| 0.84 | 10    | 9.80    | 8.3    | Inlet 22           |
| 0.46 | 10    | 9.80    | 4.5    | Hays Road          |
| 0.42 | 10    | 9.80    | 4.1    | Hays Road          |
| 1.11 | 10    | 9.80    | 10.9   | Inlet 22           |
| 0.19 | 10    | 9.80    | 1.9    | Inlet 23           |
| 0.11 | 10    | 9.80    | 1.0    | Inlet 23           |
| 1.02 | 10    | 9.80    | 10.0   | Interim to Line D4 |
| 0.07 | 10    | 9.80    | 0.7    | Hays Road          |

| <b></b>           | $\sim$ | _ | A  | n  |
|-------------------|--------|---|----|----|
| -                 | 1      |   |    | 11 |
| 1                 | 17     |   | IN |    |
| <br>Second Second | ~      |   |    | -  |

\_\_\_\_\_ ć AC. Q

PROP. STORM SEWER PROP. CURB INLETS ----- PROP. CONC. HEADWALL EXIST. STORM SEWER DRAINAGE AREA DIVIDE FLOW ARROW

DRAINAGE AREA NO.



| DESIGNED BY          | CHECKED BY         | SHEET NO.   |
|----------------------|--------------------|-------------|
| DATE<br>OCTOBER 2016 | SCALE:<br>1''-100' |             |
|                      | DATE               | DATE SCALE: |

CORWIN ENGINEERING, INC.

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

DEVELOPMENT PLANS FOR

STONE CREEK

PHASE VIII

ROCKWALL, TEXAS

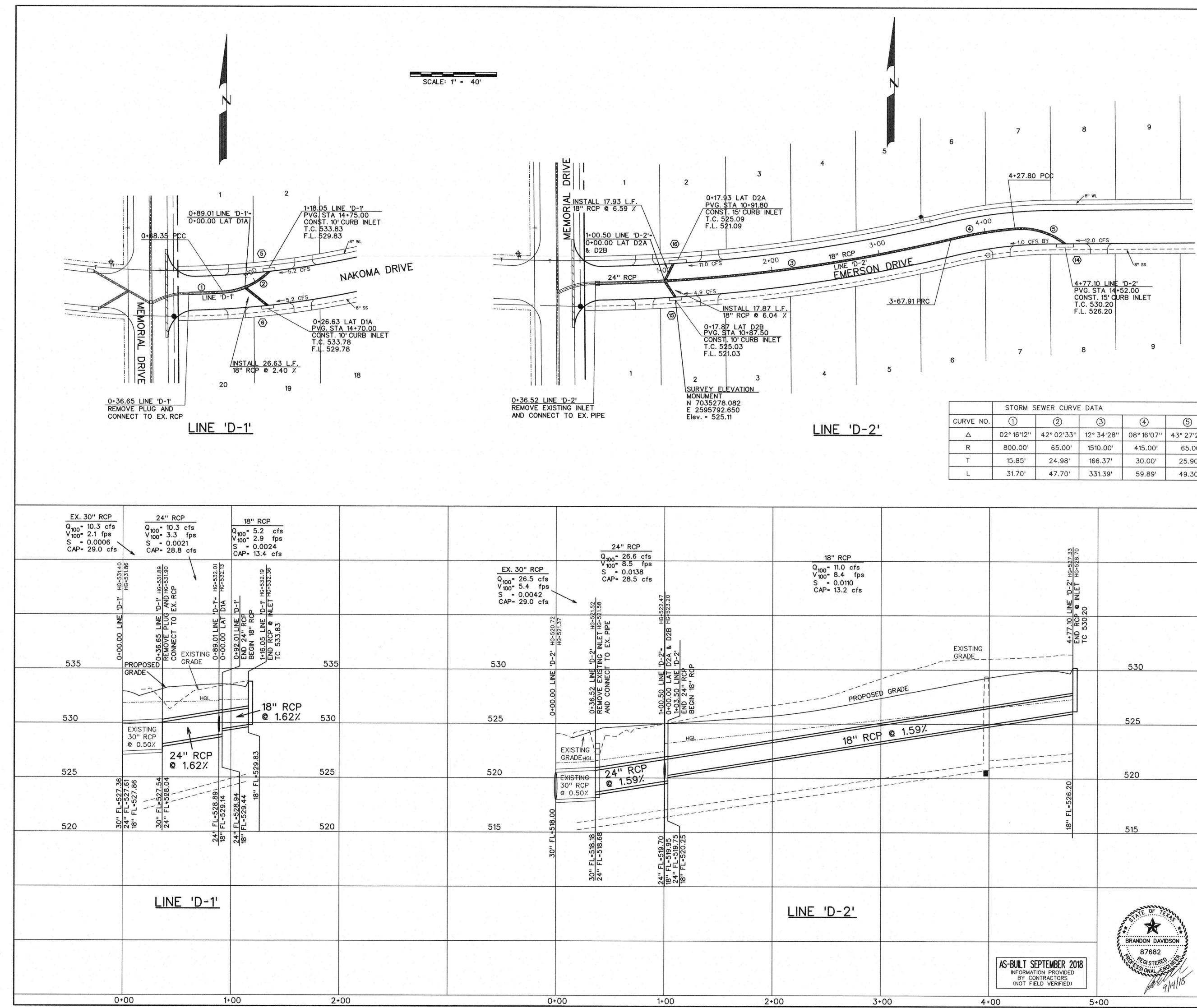
INTERIM CONDITIONS DRAINAGE AREA MAP

| 0+36.65         52.3           0+00.00         36.6           0+00.00         26.6           0         376.0           0+36.52         63.9           0+00.00         36.5           0+00.00         36.5           0+00.00         17.9           0+00.00         17.9           0+00.00         17.8           0+00.00         17.8           0+00.00         36.2           18+08.98         39.3           18+05.98         3.0.0           17+75.68         30.3           17+62.63         13.0           14+00.00         362.0           11+85.01         214.0           11+22.57         62.4           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         120.0   | 27.0<br>52.3<br>36.6<br>26.6<br>376.1<br>63.9<br>36.5<br>17.9 | 6<br>5  |  | 1.06   | 1.06  | 0.50   |      |   |                |                         | 4            |               |                         |                |            |             | 1222 20 000000 000 |        |                      |              |                | and the second s | -                |                  |
|--|---|---|--|--|---|--|------|---|----------------|-------------------------|--------------|---------------|-------------------------|----------------|------------|-------------|--------------------|--------|----------------------|--------------|----------------|--|------------------|------------------|
| 0+00.00         36.6           0+00.00         26.6           0+00.00         376.0           0+36.52         63.9           0+00.00         36.5           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.8           0+00.00         17.8           0+00.00         17.9           18+08.98         39.3           18+05.98         3.04           17+75.68         30.3           17+62.63         13.0           14+00.00         362.4           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         120.0   | 36.6<br>26.6<br>376.1<br>63.9<br>36.5                         | 5   |  | 1 0 6 1  | ter de la constante de la const | 0.50   | 0.53 | 0.53  | 10.00          | 100                     | 9.80         | 5.2           | 0.0024                  | 18             | No         | 2.9         | 0.15               | 0.13   | Inlet                | 1.25         | 10.15          | 0.17   | 532.36           | 532.19           |
| 1+00.50       376.0         0+36.52       63.9         0+00.00       36.5         0+00.00       17.9         0+00.00       17.9         0+00.00       17.8         0+00.00       17.8         0+00.00       17.8         18+08.98       39.3         18+05.98       3.0         17+75.68       30.3         17+62.63       13.0         14+00.00       362.0         11+85.01       214.0         11+22.57       62.4         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       120.0         124.49.0       <   | 376.<br>63.9<br>36.5  | 3   |  | 0.00   | 1.06  | 0.50   | 0.53 | 1.06  | 10.15          | 100                     | 9.78         | 10.3          | 0.0021                  | 24<br>30       | No<br>No   | 3.3         | 0.27               | 0.17   | 60° Wye<br>60° Wye   | 0.35         | 10.42          | 0.12   | 532.13           | 532.01           |
| 1+00.50       376.0         0+36.52       63.9         0+00.00       36.5         0+00.00       17.9         0+00.00       17.9         0+00.00       17.8         0+00.00       17.8         0+00.00       17.8         18+08.98       39.3         18+05.98       3.0         17+75.68       30.3         17+62.63       13.0         14+00.00       362.0         11+85.01       214.0         11+22.57       62.4         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       120.0         124.49.0       <   | 376.<br>63.9<br>36.5  | 3   |  |  |   |  |      |   |                |                         |              |               |                         |                |            | 5.8         | 0.00               | 0.52   | 60° Wye              | 0.35         | 0.00           | 0.46   | 531.86           | 531.40           |
| 0+36.52         63.9           0+00.00         36.5           0+00.00         17.9           0+00.00         17.9           0+00.00         17.8           0+00.00         17.8           0+00.00         17.8           18+08.98         39.3           18+05.98         3.0           17+75.68         30.3           17+62.63         13.0           14+00.00         362.4           11+85.01         214.5           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         120.0   | 63.9<br>36.5  |   | 6  | 1.06   | 1.06  | 0.50   | 0.53 | 0.53  | 10.00          | 100                     | 9.80         | 5.2           | 0.0024                  | 18             | No         | 2.9         | 0.15               | 0.13   | Inlet                | 1.25         | 10.15          | 0.17   | 532.36           | 532.19           |
| 0+36.52         63.9           0+00.00         36.5           0+00.00         17.9           0+00.00         17.9           0+00.00         17.8           0+00.00         17.8           0+00.00         17.8           18+08.98         39.3           18+05.98         3.0           17+75.68         30.3           17+62.63         13.0           14+00.00         362.4           11+85.01         214.5           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         120.0   | 63.9<br>36.5  | 1   |  |  | -   |  |      |   | A 8            | 11 23<br>C              |              |               | 8                       | a 38           | ā "        | 3.3         | 0.00               | 0.17   | 60° Wye              | 0.35         | 0.00           | 0.12   | 532.13           | 532.01           |
| 0+00.00         36.5           0+00.00         17.9           0+00.00         17.9           0+00.00         17.8           0+00.00         17.8           0+00.00         17.8           18+08.98         39.3           18+05.98         3.0           17+75.68         30.3           17+62.63         13.0           14+00.00         362.0           11+85.01         214.0           11+22.57         62.4           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         120.0  | 36.5  |   |  | 2.45   | 2.24  | 0.50   | 1.12 | 1.12  | 10.00          | 100                     | 9.80         | 11.0          | 0.0110                  | 18             | Yes        | 8.4         | 0.75               | 1.10   | Inlet                | 1.25         | 10.75          | 1.37   | 528.70           | 527.33           |
| 0+00.00         17.9           0+00.00         17.9           0+00.00         17.8           0+00.00         17.8           18+08.98         39.3           18+05.98         3.01           17+75.68         30.3           17+62.63         13.0           14+00.00         362.0           11+85.01         214.0           11+22.57         62.4           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           12.0         12.0   |   |   |  | 3.04   | 3.24  | 0.50   | 1.62 | 2.74  | 10.75          | 100                     | 9.69         | 26.6          | 0.0138                  | 24             | No         | 8.5<br>5.4  | 0.13               | 1.11   | 60° Wye<br>60° Wye   | 0.35         | 10.87          | 0.73   | 523.20<br>521.58 | 522.4            |
| 0+00.00         17.8           18+08.98         39.3           18+05.98         3.01           17+75.68         30.3           17+62.63         13.0           14+00.00         362.0           11+85.01         214.0           11+22.57         62.4           0+00.00         17.9           120.0         10.0  | 17.9  |   |  |  |   |  | 0.00 | 5m . r X  | 10.07          | 100                     |              | 20.0          | 0.0042                  |                |            | 7.2         | 0.00               | 0.80   | 60° Wye              | 0.35         | 0.00           | 0.65   | 521.37           | 521.5            |
| 18+08.98         39.3           18+05.98         3.04           17+75.68         30.3           17+62.63         13.0           14+00.00         362.4           11+85.01         214.4           11+22.57         62.4           0+00.00         17.9           0+00.00         120.0           124+95.00         120.0<   |   | 3   | 16   | 2.24   | 2.24  | 0.50   | 1.12 | 1.12  | 10.00          | 100                     | 9.80         | 11.0          | 0.0110                  | 18             | No         | 6.2         | 0.05               | 0.60   | Inlet                | 1.25         | 10.05          | 0.75   | 524.32           | 523.5            |
| 18+08.98         39.3           18+05.98         3.04           17+75.68         30.3           17+62.63         13.0           14+00.00         362.4           11+85.01         214.4           11+22.57         62.4           0+00.00         17.9           0+00.00         120.0           124+95.00         120.0<   |   |   |  |  |   |  |      |   |                |                         |              |               |                         |                |            | 8.5         | 0.00               | 1.11   | 60° Wye              | 0.35         | 0.00           | 0.90   | 523.37           | 522.4            |
| 18+05.98       3.0         17+75.68       30.3         17+62.63       13.0         14+00.00       362.0         11+85.01       214.0         11+22.57       62.4         0+00.00       17.9         0+00.00       120.0         12.9       11.4         12.9       12.0         12.9       12.0  | 17.8  | 7   | 15   | 0.79   | 1.00  | 0.50   | 0.50 | 0.50  | 10.00          | 100                     | 9.80         | 4.9           | 0.0022                  | 18             | No         | 2.8         | 0.11               | 0.12   | Inlet                | 1.25         | 10.11          | 0.15   | 523.73           | 523.5            |
| 18+05.98       3.0         17+75.68       30.3         17+62.63       13.0         14+00.00       362.0         11+85.01       214.0         11+22.57       62.4         0+00.00       17.9         0+00.00       120.0         12.9       11.4         12.9       12.0         12.9       12.0  |   |   |  | <u> </u>   |   |  |      |   |                |                         |              |               |                         |                |            | 8.5         | 0.00               | 1.11   | 60° Wye              | 0.35         | 0.00           | 1.07   | 523.54           | 522.4            |
| 17+75.68         30.3           17+62.63         13.0           14+00.00         362.0           11+85.01         214.0           11+22.57         62.4           0+00.00         17.9           0+00.00         120.0           12+26.48         49.3           11+49.00         120.0 <td>39.3</td> <td></td> <td></td> <td>1.58</td> <td>1.33</td> <td></td> <td>0.66</td> <td>0.66</td> <td>10.00</td> <td>100</td> <td>9.80</td> <td>6.5</td> <td>0.0038</td> <td>18</td> <td>Yes</td> <td>10.5</td> <td>0.06</td> <td>1.71</td> <td>Inlet</td> <td>1.25</td> <td>10.06</td> <td>2.14</td> <td>534.87</td> <td>532.7</td> | 39.3  |   |  | 1.58   | 1.33  |  | 0.66 | 0.66  | 10.00          | 100                     | 9.80         | 6.5           | 0.0038                  | 18             | Yes        | 10.5        | 0.06               | 1.71   | Inlet                | 1.25         | 10.06          | 2.14   | 534.87           | 532.7            |
| 17+62.63       13.0         14+00.00       362.0         11+85.01       214.0         11+22.57       62.4         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       18.6         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       120.0         12+75.85       93.1         12+75.85       93.1         12+75.95       93.1         12+6.48 <t< td=""><td></td><td></td><td></td><td>0.00</td><td>0.00</td><td>0.50</td><td>0.00</td><td>0.66</td><td>10.06</td><td>100</td><td>9.79</td><td>6.5</td><td>0.0038</td><td>18<br/>18</td><td>Yes<br/>Yes</td><td>6.3</td><td>0.01</td><td>0.62</td><td>PVI<br/>60° Wye</td><td>1.00</td><td>10.07</td><td>0.00</td><td>532.59<br/>532.58</td><td>532.5</td></t<>  |   |   |  | 0.00   | 0.00  | 0.50   | 0.00 | 0.66  | 10.06          | 100                     | 9.79         | 6.5           | 0.0038                  | 18<br>18       | Yes<br>Yes | 6.3         | 0.01               | 0.62   | PVI<br>60° Wye       | 1.00         | 10.07          | 0.00   | 532.59<br>532.58 | 532.5            |
| 11+85.01       214.0         11+22.57       62.4         0+00.00       17.9         0+00.00       17.8         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       18.6         0+00.00       18.6         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       120.0         12+75.85       93.1         12+75.85       93.1         12+26.48       49.3         11+05.00       120.0         12+0.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         0+00.00   | 13.0  | 5   | D3H  | 0.25   | 0.50  | 0.50   | 0.25 | 1.02  | 10.15          | 100                     | 9.78         | 10.0          | 0.0091                  | 18             | Yes        | 6.8         | 0.03               | 0.72   | 60° Wye              | 0.35         | 10.13          | 0.49   | 531.98           | 531.5            |
| 11+22.57       62.4         0+00.00       17.9         0+00.00       17.8         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       18.6         0+00.00       18.6         0+00.00       18.6         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       17.9         0+00.00       120.0         12+75.85       93.1         12+75.85       93.1         12+26.48       49.3         11+05.00       120.0         12+0.00       120.0         5+00.00       120.0         5+00.00       120.0         0+00.00       8.08         0+00.00 <t< td=""><td></td><td></td><td></td><td>0.00</td><td>0.00</td><td>0.50</td><td>0.00</td><td>1.02</td><td>10.18</td><td>100</td><td>9.77</td><td>10.0</td><td>0.0091</td><td>18</td><td>Yes<br/>Yes</td><td>6.8<br/>10.3</td><td>0.89</td><td>0.72</td><td>MH<br/>PVI</td><td>0.55</td><td>11.07<br/>11.42</td><td>0.39</td><td>531.38<br/>529.98</td><td>530.91</td></t<>   |   |   |  | 0.00   | 0.00  | 0.50   | 0.00 | 1.02  | 10.18          | 100                     | 9.77         | 10.0          | 0.0091                  | 18             | Yes<br>Yes | 6.8<br>10.3 | 0.89               | 0.72   | MH<br>PVI            | 0.55         | 11.07<br>11.42 | 0.39   | 531.38<br>529.98 | 530.91           |
| 0+00.00 17.8<br>0+00.00 17.9<br>0+00.00 18.6<br>11+33.74 120.9<br>10+37.85 95.8<br>9+75.00 62.8<br>4+95.00 30.0<br>0+00.00 17.9<br>0+00.00 17.9<br>0+00.00 17.9<br>0+00.00 17.8<br>17+59.00 260.3<br>17+59.00 260.3<br>17+00.0 59.0<br>16+09.0 91.0<br>14+89.00 120.0<br>12+75.85 93.1<br>12+26.48 49.3<br>11+05.00 121.0<br>9+80.00 125.0<br>8+60.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>0+00.00 57.2<br>0+00.00 8.08<br>0+00.00 8.08<br>0+00.00 8.08   | 62.4  |   |  | 2.11   | 2.11  | 0.50   | 1.06 | 2.08  | 11.42          | 100                     | 9.59         | 20.0          | 0.0078                  | 24             | No         | 6.4         | 0.16               | 0.63   | 60° Wye              | 0.35         | 11.58          | 0.05   | 527.69           | 527.6            |
| 0+00.00 17.8<br>0+00.00 17.9<br>0+00.00 18.6<br>11+33.74 120.9<br>10+37.85 95.8<br>9+75.00 62.8<br>4+95.00 30.0<br>0+00.00 17.9<br>0+00.00 17.9<br>0+00.00 17.9<br>0+00.00 17.8<br>17+59.00 260.3<br>17+59.00 260.3<br>17+00.0 59.0<br>16+09.0 91.0<br>14+89.00 120.0<br>12+75.85 93.1<br>12+26.48 49.3<br>11+05.00 121.0<br>9+80.00 125.0<br>8+60.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>0+00.00 57.2<br>0+00.00 8.08<br>0+00.00 8.08<br>0+00.00 8.08   |   |   |  |  |   |  |      |   |                |                         |              |               |                         |                |            | 4.1         |                    | 0.26   |                      | 1.00         |                | 0.00   | 527.15           | 527.1            |
| 0+00.00 17.9<br>0+00.00 18.6<br>0+00.00 18.6<br>11+33.74 120.9<br>10+37.85 95.8<br>9+75.00 62.8<br>0+00.00 17.9<br>0+00.00 17.9<br>0+00.00 17.8<br>0+00.00 17.8<br>17+59.00 260.3<br>17+00.00 59.0<br>16+09.00 91.0<br>14+89.00 120.0<br>13+69.00 120.0<br>13+69.00 120.0<br>12+75.85 93.1<br>12+26.48 49.3<br>11+05.00 121.0<br>9+80.00 125.0<br>8+60.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>0+43.03 91.9<br>0+57.20 85.8<br>0+00.00 8.08<br>0+00.00 8.08<br>0+00.00 8.08  | 17.9  | 4   | 11   | 1.06   | 1.06  | 0.50   | 0.53 | 0.53  | 10.00          | 100                     | 9.80         | 5.2           | 0.0024                  | 18             |            | 2.9         | 0.10               | 0.13   | Inlet                | 1.25         | 10.10          | 0.17   | 528.43           | 528.2            |
| 0+00.00 17.9<br>0+00.00 18.6<br>0+00.00 18.6<br>11+33.74 120.9<br>10+37.85 95.8<br>9+75.00 62.8<br>0+00.00 17.9<br>0+00.00 17.9<br>0+00.00 17.8<br>0+00.00 17.8<br>17+59.00 260.3<br>17+00.00 59.0<br>16+09.00 91.0<br>14+89.00 120.0<br>13+69.00 120.0<br>13+69.00 120.0<br>12+75.85 93.1<br>12+26.48 49.3<br>11+05.00 121.0<br>9+80.00 125.0<br>8+60.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>0+43.03 91.9<br>0+57.20 85.8<br>0+00.00 8.08<br>0+00.00 8.08<br>0+00.00 8.08  |   |   |  |  |   |  |      |   |                | 9 cards 10 c valor 10 e |              |               | 1. N.N. <sup>N.</sup> 3 | 5 <sup>2</sup> |            | 6.4         | 0.00               | 0.63   | 60° Wye              | 0.35         | 0.00           | 0.58   | 528.22           | 527.6            |
| 0+00.00         18.6           11+33.74         120.9           10+37.85         95.8           9+75.00         62.8           4+95.00         30.0           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.8           17+59.00         260.3           17+69.00         120.0           14+89.00         120.0           13+69.00         120.0           12+75.85         93.1           12+26.48         49.3           11+05.00         121.4           9+80.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         57.2           0+00.00         8.08           0+00.00         8.08           0+00.00         8.08   | 17.8  | 6   | 12   | 1.06   | 1.06  | 0.50   | 0.53 | 0.53  | 10.00          | 100                     | 9.80         | 5.2           | 0.0024                  | 18             |            | 2.9         | 0.10               | 0.13   | Inlet                | 1.25         | 10.10          | 0.17   | 528.43           | 528.2            |
| 0+00.00         18.6           11+33.74         120.9           10+37.85         95.8           9+75.00         62.8           4+95.00         30.0           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           0+00.00         17.8           17+59.00         260.3           17+69.00         120.0           14+89.00         120.0           13+69.00         120.0           12+75.85         93.1           12+26.48         49.3           11+05.00         121.4           9+80.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         57.2           0+00.00         8.08           0+00.00         8.08           0+00.00         8.08   |   |   |  |  |   |  |      |   |                |                         |              |               |                         |                |            | 6.4         | 0.00               | 0.63   | 60° Wye              | 0.35         | 0.00           | 0.58   | 528.22           | 527.6            |
| 11+33.74         120.9           10+37.85         95.8           9+75.00         62.8           4+95.00         30.0           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           17+59.00         260.3           17+59.00         260.3           17+59.00         120.0           14+89.00         120.0           13+69.00         120.0           12+75.85         93.1           12+26.48         49.3           11+05.00         121.4           9+80.00         125.0           8+60.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           1+43.03         91.9           0+57.20         85.8           0+00.00         8.08           0+00.00         8.08  | 17.9  | 0   | 10   | 0.25   | 0.50  | 0.50   | 0.25 | 0.25  | 10.00          | 100                     | 9.80         | 2.5           | 0.0005                  | 18             |            | 1.4<br>6.8  | 0.21               | 0.03   | Inlet<br>60° Wye     | 1.25         | 10.21          | 0.04   | 532.25<br>532.20 | 532.2<br>531.5   |
| 11+33.74         120.9           10+37.85         95.8           9+75.00         62.8           4+95.00         30.0           0+00.00         17.9           0+00.00         17.9           0+00.00         17.9           17+59.00         260.3           17+59.00         260.3           17+59.00         120.0           14+89.00         120.0           13+69.00         120.0           12+75.85         93.1           12+26.48         49.3           11+05.00         121.4           9+80.00         125.0           8+60.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           1+43.03         91.9           0+57.20         85.8           0+00.00         8.08           0+00.00         8.08  |   |   |  |  |   |  |      |   |                |                         |              |               |                         |                |            | 0.0         | 0.00               | 0.72   | oo wye               | 0.33         | 0.00           | 1  | 332.20           | 331.3            |
| 10+37.85       95.8         9+75.00       62.8         4+95.00       30.0         0+00.00       17.9         0+00.00       17.9         0+00.00       17.8         17+59.00       260.3         17+00.00       59.0         16+09.00       91.0         14+89.00       120.0         12+75.85       93.1         12+26.48       49.3         11+05.00       121.4         9+80.00       122.0         6+20.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         1+43.03       91.9         0+57.20       85.8         0+00.00       8.08         0+00.00       8.08         0+00.00       8.08   | 18.6  | 1   | 8  | 0.22   | 0.22  | 0.50   | 0.11 | 0.11  | 10.00          | 100                     | 9.80         | 1.1           | 0.0001                  | 18             |            | 0.6         | 0.51               | 0.01   | Inlet<br>60° Wye     | 1.25         | 10.51          | 0.01   | 532.81<br>532.80 | 532.8            |
| 10+37.85       95.8         9+75.00       62.8         4+95.00       30.0         0+00.00       17.9         0+00.00       17.9         0+00.00       17.8         17+59.00       260.3         17+00.00       59.0         16+09.00       91.0         14+89.00       120.0         12+75.85       93.1         12+26.48       49.3         11+05.00       121.4         9+80.00       122.0         6+20.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         1+43.03       91.9         0+57.20       85.8         0+00.00       8.08         0+00.00       8.08         0+00.00       8.08   |   |   |  |  |   |  |      |   |                |                         |              |               |                         |                |            |             | -                  | 0.00   | 00 wye               | 0.33         | -0.00          | 0.05   | 532.00           | 332.1            |
| 9+75.00         62.8           4+95.00         30.0           0+00.00         17.9           0+00.00         17.9           0+00.00         17.8           17+59.00         260.3           17+00.00         59.0           16+09.00         91.0           14+89.00         120.0           12+75.85         93.1           12+26.48         49.3           11+05.00         121.4           9+80.00         122.0           6+20.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           5+00.00         120.0           1+43.03         91.9           0+57.20         85.8           0+00.00         8.08           0+00.00         8.08           0+00.00         8.08   | and the second second second second                           |   |  |  | 2.08  | 0.50   | 1.04 | 2.10  | 10.00          | 100                     | 9.80         | 10.2          | 0.0094                  | 18             | Yes<br>No  | 8.0<br>5.2  | 0.25               | 0.99   | Inlet<br>60° Wye     | 1.25         | 10.25          | 1.24   | 534.38<br>532.00 | 533.1<br>531.9   |
| 0+00.00 17.9<br>0+00.00 17.8<br>17+59.00 260.3<br>17+00.00 59.0<br>16+09.00 91.0<br>14+89.00 120.0<br>13+69.00 120.0<br>12+75.85 93.1<br>12+26.48 49.3<br>11+05.00 121.0<br>9+80.00 125.0<br>8+60.00 120.0<br>6+20.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>1+43.03 91.9<br>0+57.20 85.8<br>0+00.00 8.08<br>0+00.00 8.08<br>0+00.00 8.08   | 62.8  |   |  |  | 0.66  | 0.50   | 0.33 | 2.43  | 10.56          | 100                     | 9.72         | 23.6          | 0.0058                  | 27             | Yes        | 7.4         | 0.14               | 0.41   | 60° Wye              | 0.35         | 10.38          | 0.71   | 531.51           | 530.8            |
| 0+00.00 17.9<br>0+00.00 17.8<br>17+59.00 260.3<br>17+00.00 59.0<br>16+09.00 91.0<br>14+89.00 120.0<br>13+69.00 120.0<br>12+75.85 93.1<br>12+26.48 49.3<br>11+05.00 121.0<br>9+80.00 125.0<br>8+60.00 120.0<br>6+20.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>1+43.03 91.9<br>0+57.20 85.8<br>0+00.00 8.08<br>0+00.00 8.08<br>0+00.00 8.08   |   |   |  |  |   |  |      |   |                |                         |              |               |                         |                |            |             |                    |        |                      |              |                |  | 530.44           |                  |
| 0+00.00 17.8<br>17+59.00 260.3<br>17+00.00 59.0<br>16+09.00 91.0<br>14+89.00 120.0<br>13+69.00 120.0<br>12+75.85 93.1<br>12+26.48 49.3<br>11+05.00 121.0<br>9+80.00 125.0<br>8+60.00 120.0<br>7+40.00 120.0<br>6+20.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>0+00.00 8.08<br>0+00.00 8.08<br>0+00.00 8.08  | 30.0  | 0 D   | D4,29  | 7.79   | 7.79  | 0.50   | 3.89 | 3.89  | 10.56          | 100                     | 9.72         | 37.8          | 0.0280                  | 24             | Yes        | 12.4        | 0.04               | 2.39   |                      | 1.25         | 10.60          | 2.98   | 517.79           | 514.8            |
| 0+00.00 17.8<br>17+59.00 260.3<br>17+00.00 59.0<br>16+09.00 91.0<br>14+89.00 120.0<br>13+69.00 120.0<br>12+75.85 93.1<br>12+26.48 49.3<br>11+05.00 121.0<br>9+80.00 125.0<br>8+60.00 120.0<br>7+40.00 120.0<br>6+20.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>5+00.00 120.0<br>0+00.00 8.08<br>0+00.00 8.08<br>0+00.00 8.08  |   |   |  |  |   |  | 2 2  |   |                |                         |              |               |                         |                |            |             |                    | а<br>1 |                      |              | <u>.</u>       |  | 513.97           |                  |
| 17+59.00       260.3         17+00.00       59.0         16+09.00       91.0         14+89.00       120.0         13+69.00       120.0         12+75.85       93.1         12+26.48       49.3         11+05.00       121.0         9+80.00       125.0         8+60.00       120.0         7+40.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         6+20.00       120.0         5+00.00       120.0         0+00.00       57.2         0+00.00       8.08         0+00.00       8.08         0+00.00       8.08         0+00.00       8.08   | 17.9  | 6   | 2  | 0.66   | 0.66  | 0.50   | 0.33 | 0.33  | 10.00          | 100                     | 9.80         | 3.2           | 0.0009                  | 18             |            | 1.8         | 0.16               | 0.05   | Inlet                | 1.25         | 10.16          | 0.06   | 531.72           | 531.6            |
| 17+59.00       260.3         17+00.00       59.0         16+09.00       91.0         14+89.00       120.0         13+69.00       120.0         12+75.85       93.1         12+26.48       49.3         11+05.00       121.0         9+80.00       125.0         8+60.00       120.0         7+40.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         6+20.00       120.0         5+00.00       120.0         0+00.00       57.2         0+00.00       8.08         0+00.00       8.08         0+00.00       8.08         0+00.00       8.08   | <u></u>   |   |  |  | · · · · · · · · · · · · · · · · · · ·   |  |      |   |                |                         |              |               |                         |                |            | 7.4         | 0.00               | 0.85   | 60° Wye              | 0.35         | 0.00           | 0.83   | 531.64           | 530.8            |
| 17+00.00       59.0         16+09.00       91.0         14+89.00       120.0         13+69.00       120.0         12+75.85       93.1         12+26.48       49.3         11+05.00       121.0         9+80.00       125.0         8+60.00       120.0         7+40.00       120.0         6+20.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         0+57.20       85.8         0+00.00       8.08         0+00.00       8.08         0+00.00       8.08   | 17.8  | 4   | 3  | 2.13   | 2.13  | 0.50   | 1.07 | 1.07  | 10.00          | 100                     | 9.80         | 10.4          | 0.0099                  | 18             |            | 5.9         | 0.05               | 0.54   | Inlet                | 1.25         | 10.05          | 0.68   | 533.01           | 532.3            |
| 17+00.00       59.0         16+09.00       91.0         14+89.00       120.0         13+69.00       120.0         12+75.85       93.1         12+26.48       49.3         11+05.00       121.0         9+80.00       125.0         8+60.00       120.0         7+40.00       120.0         6+20.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         5+00.00       120.0         0+57.20       85.8         0+00.00       8.08         0+00.00       8.08         0+00.00       8.08   |   |   |  |  | <i></i>   |  |      |   |                |                         |              |               |                         |                |            | 5.2         | 0.00               | 0.41   | 60° Wye              | 0.35         | 0.00           | 0.22   | 532.16           | 531.9            |
| 16+09.00         91.0           14+89.00         120.0           13+69.00         120.0           12+75.85         93.1           12+26.48         49.3           11+05.00         121.0           9+80.00         125.0           8+60.00         120.0           7+40.00         120.0           6+20.00         120.0           5+00.00         120.0           5+00.00         120.0           3+40.00         160.0           2+35.00         105.0           1+43.03         91.9           0+57.20         85.8           0+00.00         8.08           0+00.00         8.08           0+00.00         8.08  | 260.3   |   |  |  |   |  | 0.30 | 0.30  | 10.00          | 100                     | 9.80         | 2.9           | 0.0008                  | 18             | Yes        | 4.7         | 0.92               | 0.34   | Inlet                | 1.25         | 10.92          | 0.43   | 523.92           | 523.4            |
| 13+69.00       120.0         12+75.85       93.1         12+26.48       49.3         11+05.00       121.0         9+80.00       125.0         8+60.00       120.0         7+40.00       120.0         6+20.00       120.0         5+00.00       120.0         3+40.00       160.0         2+35.00       105.0         1+43.03       91.9         0+57.20       85.8         0+00.00       8.08         0+00.00       8.08         0+00.00       8.08   | 91.0  |   | and the second s | the second s   |   | 0.68   | 0.37 | 0.67  | 10.92          | 100                     | 9.66         | 6.5           | 0.0038                  | 18<br>18       | Yes<br>Yes | 5.7<br>7.5  | 0.17               | 0.50   | 60° Wye<br>PVI       | 0.35         | 11.10<br>11.30 | 0.38   | 523.29<br>522.68 | 522.9<br>522.3   |
| 12+75.85         93.1           12+26.48         49.3           11+05.00         121.4           9+80.00         125.0           8+60.00         120.0           7+40.00         120.0           6+20.00         120.0           5+00.00         120.0           3+40.00         160.0           2+35.00         105.0           1+43.03         91.9           0+57.20         85.8           0+00.00         8.08           0+00.00         8.08           0+00.00         8.08  | 120.0   | the second s  | the second s   | 0.56   | the second s  | 0.68   | 0.38 | 1.05  | 11.30<br>11.65 | 100                     | 9.61         | 10.1          | 0.0093                  | 18             | No         | 5.7         | 0.35               | 0.51   | 60° Wye              | 0.35         | 11.65          | 0.00   | 521.96           | 521.9            |
| 11+05.00         121.4           9+80.00         125.0           8+60.00         120.0           7+40.00         120.0           6+20.00         120.0           5+00.00         120.0           3+40.00         160.0           2+35.00         105.0           1+43.03         91.9           0+57.20         85.8           0+00.00         8.08           0+00.00         8.08           0+00.00         8.08  | 93.1  | the state of the state of the sector state in the sector state of |  | 0.44   |   | 0.68   | 0.30 | 1.63  | 11.85          | 100                     | 9.55         | 12.9<br>15.5  | 0.0151                  | 18<br>24       | No<br>No   | 7.3         | 0.27               | 0.83   | 60° Wye<br>60° Wye   | 0.35         | 11.92<br>12.24 | 0.65   | 520.85<br>518.38 | 520.2<br>518.3   |
| 9+80.00 125.0<br>8+60.00 120.0<br>7+40.00 120.0<br>6+20.00 120.0<br>5+00.00 120.0<br>3+40.00 160.0<br>2+35.00 105.0<br>1+43.03 91.9<br>0+57.20 85.8<br>0+00.00 57.2<br>0+00.00 8.08<br>0+00.00 8.08  | 49.3  | the second s  |  | 0.32   |   | 0.72   | 0.23 | 1.87  | 12.24<br>12.38 | 100                     | 9.46         | 17.7          | 0.0061                  | 24             | No         | 5.6         | 0.15               | 0.49   | 60° Wye              | 0.35         | 12.38          | 0.36   | 517.86           | 517.5            |
| 7+40.00       120.0         6+20.00       120.0         5+00.00       120.0         3+40.00       160.0         2+35.00       105.0         1+43.03       91.9         0+57.20       85.8         0+00.00       57.2         0+00.00       8.08         0+00.00       8.08         0+00.00       8.08  | 121.  |   |  | Contraction of the local day in the loca |   | the second s | 0.29 | 6.91  | 12.65          | 100                     | 9.44<br>9.40 | 62.5<br>65.0  | 0.0057                  | 39<br>39       | No<br>No   | 7.5<br>7.8  | 0.27               | 0.88   | MH<br>60° Wye        | 1.00         | 12.65          | 0.88   | 517.20<br>515.62 | 516.3<br>515.1   |
| 6+20.00 120.0<br>5+00.00 120.0<br>3+40.00 160.0<br>2+35.00 105.0<br>1+43.03 91.9<br>0+57.20 85.8<br>0+00.00 57.2<br>0+00.00 8.08<br>0+00.00 8.08   |   |   |  |  | the same is a second second second second second  | 0.70   | 0.26 | 7.17  | 12.92          | 100<br>100              | 9.36         | 67.1          | 0.0066                  | 39<br>39       | No<br>No   | 8.1<br>8.4  | 0.25               | 1.02   | 60° Wye<br>60° Wye   | 0.60         | 13.16<br>13.40 | 0.44   | 514.42           | 513.9            |
| 3+40.00 160.0<br>2+35.00 105.0<br>1+43.03 91.9<br>0+57.20 85.8<br>0+00.00 57.2<br>0+00.00 8.08<br>0+00.00 8.08<br>0+00.00 8.08   | 120.0   | 0   | D7D  | 0.40   | 0.40  | 0.70   | 0.28 | 7.73  | 13.40          | 100                     | 9.29         | 71.8          | 0.0051                  | 42             | No         | 7.5         | 0.24               | 0.86   | 60° Wye              | 0.60         | 13.40          | 0.48   | 513.18<br>511.85 | 512.7<br>511.7   |
| 2+35.00 105.0<br>1+43.03 91.9<br>0+57.20 85.8<br>0+00.00 57.2<br>0+00.00 8.08<br>0+00.00 8.08<br>0+00.00 8.08  |   | the second se   |  | 0.40   | 0.40  | 0.70   | 0.28 | 8.01 8.29   | 13.67<br>13.93 | 100                     | 9.25         | 74.1          | 0.0054                  | 42             | No<br>No   | 7.7         | 0.26               | 0.92   | 60° Wye<br>60° Wye   | 0.60         | 13.93          | 0.40   | 511.14<br>510.09 | 510.7<br>509.6   |
| 0+57.20 85.8<br>0+00.00 57.2<br>0+00.00 8.08<br>0+00.00 8.08<br>0+00.00 8.08   | 105.0   | 0   | D7G  | 0.53   | 0.53  | 0.70   | 0.37 | 8.66  | 14.27          | 100                     | 9.16         | 79.3          | 0.0062                  | 42             | No         | 8.2         | 0.21               | 1.06   | 60° Wye              | 0.60         | 14.48          | 0.43   | 508.74           | 508.2            |
| 0+00.00 57.2<br>0+00.00 8.08<br>0+00.00 8.08<br>0+00.00 8.08   |   |   |  | 0.31   | 0.31  | 0.72   | 0.22 | 8.88  | 14.48          | 100                     | 9.13         | 81.1<br>105.6 | 0.0065                  | 42             | No<br>No   | 8.4         | 0.18               | 1.10   | 60° Wye<br>MH        | 0.60         | 14.66          | 0.47   | 507.62           | 507.1<br>505.8   |
| 0+00.00 8.08   | 57.2  |   |  | 0.96   | 0.96  | 0.50   | 0.48 | 12.09   | 14.79          | 100                     | 9.08         | 109.8         | 0.0119                  | 42             | No         | 11.4        | 0.08               | 2.02   | 60° Wye              | 0.40         | 14.75          | 0.90   | 506.55           | 503.9            |
| 0+00.00 8.08   |   |   |  |  |   |  |      |   |                |                         |              |               |                         |                |            |             |                    |        |                      |              |                |  | 503.28           |                  |
| 0+00.00 8.08   | 8.08  | 2:  | 1,21Å  | 0.32   | 0.32  | 0.72   | 0.23 | 0.23  | 10.00          | 100                     | 9.80         | 2.3           | 0.0005                  | 18             |            | 1.3         | 0.10               | 0.03   | Inlet                | 1.25         | 10.10          | 0.03   | 518.02           | 517.9            |
| 0+00.00 8.08   |   |   |  |  |   |  |      |   |                |                         |              |               |                         |                |            | 5.6         | 0.00               | 0.49   | 60° Wye              | 0.35         | 0.00           | 0.48   | 517.98           | 517.5            |
|  | 8.08  | 21  | 0,20Å  | 0.40   | 0.40  | 0.70   | 0.28 | 0.28  | 10.00          | 100                     | 9.80         | 2.8           | 0.0007                  | 18             |            | 1.6         | 0.09               | 0.04   | Inlet                | 1.25         | 10.09          | 0.05   | 518.71           | 518.6            |
|  |   |   |  |  |   |  |      | - 100 A 1 |                | a de ray de             |              |               |                         |                |            | 4.9         | 0.00               | 0.38   | 60° Wye              | 0.35         | 0.00           | 0.37   | 518.66           | 518.3            |
| 0+00.00 8.08   | 8.08  | 1   | 9,19A  | 0.44   | 0.44  | 0.68   | 0.30 | 0.30  | 10.00          | 100                     | 9.80         | 2.9           | 0.0008                  | 18             |            | 1.7         | 0.08               | 0.04   | Inlet                | 1.25         | 10.08          | 0.05   | 521.07           | 521.0            |
| 0+00.00 8.08   |   |   |  |  |   |  |      |   |                |                         |              |               |                         |                |            | 7.3         | 0.00               | 0.83   | 60° Wye              | 0.35         | 0.00           | 0.81   | 521.01           | 520.2            |
|  | 8.08  | 1   | 8,18A  | 0.56   | 0.56  | 0.68   | 0.38 | 0.38  | 10.00          | 100                     | 9.80         | 3.7           | 0.0012                  | 18             |            | 2.1         | 0.06               | 0.07   | Inlet                | 1.25         | 10.06          | 0.09   | 522.54           | 522.4            |
|  |   |   |  |  |   |  | 2    |   |                |                         |              |               |                         |                |            | 5.7         | 0.00               | 0.51   | 60° Wye              | 0.35         | 0.00           | 0.48   | 522.45           | 521.9            |
| 0+00.00 8.08   | 8.08  | 1   | 7,17Å  | 0.55   | 0.55  | 0.72   | 0.39 | 0.39  | 10.00          | 100                     | 9.80         | 3.9           | 0.0013                  | 18             | 2          | 2.2         | 0.06               | 0.07   | Inlet                | 1.25         | 10.06          | 0.09   | 523.49           | 523.4            |
|  |   |   |  |  |   |  |      |   |                |                         |              |               |                         |                |            | 5.7         | 0.00               | 0.50   | 60° Wye              | 0.35         | 0.00           | 0.48   | 523.38           | 522.9            |
|  | 8.22<br>40.7  |   | Contraction Contraction and places of Sector Analysis of Sector  | 1.33   | 1.33  |  | 0.84 | 0.84  | 10.00          | 100                     | 9.80         | 8.3           | 0.0027                  | 21             | Yes        | 5.1         | 0.03               | 0.40   | Inlet                | 1.25         | 10.03          | 0.50   | 525.74           | 525.2            |
|  | 40.7  | the second s  |  |  | 0.00  | 0.50   | 0.00 | 0.84  | 10.03<br>10.16 | 100<br>100              | 9.80<br>9.78 | 8.2           | 0.0027                  | 21<br>21       | Yes<br>Yes | 5.1<br>5.1  | 0.13               | 0.40   | 45° Bend<br>45° Bend | 0.50<br>0.50 | 10.16<br>10.29 | 0.20   | 525.21<br>524.90 | 525.03<br>524.70 |
|  |   |   | 0  |  |   |  |      | 5   |                |                         | 01           |               | т.,                     |                |            |             |                    |        |                      |              |                |  | 524.59           | 1                |

## INLET CALCULATIONS

| 1.       |          |         |    |           | Design  |       |           | Area Runo | off: Q=CIA |         |       | Carry-Over | Total  | 1.1      |             |         | Maximum       | Actual  | Maximum   |        | Se      | elected In | et       |               |               |
|----------|----------|---------|----|-----------|---------|-------|-----------|-----------|------------|---------|-------|------------|--------|----------|-------------|---------|---------------|---------|-----------|--------|---------|------------|----------|---------------|---------------|
|          |          |         |    |           | Storm   |       | Intensity | Runoff    |            | Area    |       | from       | Gutter | Gutter   | Gutter      | ж.<br>Т | Allowable     | Ponding | Allowable | Actual |         | 14         | Inlet    | Carry-Over to | Carry-Over to |
|          |          | Inlet   |    |           | Freq.   | Tc    | " "       | Coeff.    |            | "A"     | Q     | Upstream   | Flow   | Capacity | Slope       | Crown   | Ponding Depth | Depth   | Spread    | Spread | Length  |            | Capacity | Downstream    | Downstream    |
| Inlet No | Station  | Offse   | et | Street    | (years) | (min) | (in/hr)   | "C"       | DA #       | (acres) | (cfs) | (cfs)      | (cfs)  | (cfs)    | (ft/100 ft) | Туре    | (ft)          | (ft)    | (ft)      | (ft)   | LI (ft) | Туре       | (cfs)    | Inlet (cfs)   | Inlet No.     |
| 1        | 12+51.00 | 0+15.50 | LT | Montrose  | 100     | 10    | 9.8       | 0.50      | 1          | 2.08    | 10.2  | 0.0        | 10.2   | 16.8     | 1.48%       | 6" pbl  | 0.5           | 0.30    | 15        | 9.1    | 15      | STD.       | 11.5     | 0.0           |               |
| 2        | 10+47.00 | 0+15.50 | LT | Montrose  | 100     | 10    | 9.8       | 0.50      | 2          | 0.66    | 3.2   | 0.0        | 3.2    | 11.6     | 0.70%       | 6" pbl  | 0.5           | 0.14    | 15        | 4.2    | 10      | STD.       | 12.5     | 0.0           |               |
| 3        | 11+42.50 | 0+15.50 | RT | Montrose  | 100     | 10    | 9.8       | 0.50      | 3          | 2.13    | 10.4  | 0.0        | 10.4   | 11.6     | 0.70%       | 6" pbl  | 0.5           | 0.45    | 15        | 13.5   | 10      | STD.       | 12.5     | 0.0           |               |
| 4        | 10+89.97 | 0+33.00 | RT | Memorial  | 100     | 10    | 9.8       | 0.50      | 4          | 2.45    | 12.0  | 0.0        | 12.0   | N/A      | N/A         | N/A     | 1             | 0.60    | N/A       | N/A    | 4'X4'   | WYE        | 29.0     | 0.0           |               |
| 5        | 14+75.00 | 0+15.50 | LT | Nakoma    | 100     | 10    | 9.8       | 0.50      | 5          | 1.06    | 5.2   | 0.0        | 5.2    | 12.4     | 0.80%       | 6" pbl  | 0.5           | 0.21    | 15        | 6.3    | 10      | STD.       | 7.2      | 0.0           | 1             |
| 6        | 14+70.00 | 0+15.50 | RT | Nakoma    | 100     | 10    | 9.8       | 0.50      | 6          | 1.06    | 5.2   | 0.0        | 5.2    | 12.4     | 0.80%       | 6" pbl  | 0.5           | 0.21    | 15        | 6.3    | 10      | STD.       | 7.2      | 0.0           |               |
| 7        | 7+39.35  | 0+35.00 | RT | Memorial  | 100     | 10    | 9.8       | 0.50      | 7          | 2.47    | 12.1  | 0.0        | 12.1   | N/A      | N/A         | N/A     | 1             | 0.60    | N/A       | N/A    | 4'X4'   | WYE        | 29.0     | 0.0           |               |
| 8        | 4+13.50  | 0+15.50 | LT | Street E  | 100     | 10    | 9.8       | 0.50      | 8          | 0.22    | 1.1   | 0.0        | 1.1    | 19.5     | 2.00%       | 6" pbl  | 0.5           | 0.03    | 15        | 0.8    | 5       | STD.       | 2.7      | 0.0           | 1             |
| 9        | 4+41.00  | 0+15.50 | RT | Street E  | 100     | 10    | 9.8       | 0.50      | 9          | 1.58    | 7.7   | 0.0        | 7.7    | 19.5     | 2.00%       | 6" pbl  | 0.5           | 0.20    | 15        | 5.9    | 10      | STD.       | 6.5      | 1.2           | 10            |
| 10       | 3+82.00  | 0+15.50 | RT | Street E  | 100     | 10    | 9.8       | 0.50      | 10         | 0.25    | 1.2   | 1.2        | 2.5    | 19.5     | 2.00%       | 6" pbl  | 0.5           | 0.06    | 15        | 1.9    | 5       | STD.       | 2.7      | 0.0           |               |
| 11       | 15+50.00 | 0+15.50 | LT | Harvard   | 100     | 10    | 9.8       | 0.50      | 11         | 1.06    | 5.2   | 0.0        | 5.2    | 11.6     | 0.70%       | 6" pbl  | 0.5           | 0.22    | 15        | 6.7    | 10      | STD.       | 7.3      | 0.0           |               |
| 12       | 15+46.00 | 0+15.50 | RT | Harvard   | 100     | 10    | 9.8       | 0.50      | 12         | 1.06    | 5.2   | 0.0        | 5.2    | 11.6     | 0.70%       | 6" pbl  | 0.5           | 0.22    | 15        | 6.7    | 10      | STD.       | 7.3      | 0.0           |               |
| 13       | 3+89.34  | 0+33.00 | RT | Memorial  | 100     | 10    | 9.8       | 0.50      | 13         | 1.67    | 8.2   | 0.0        | 8.2    | N/A      | N/A         | 6" pbl  | 1             | 0.55    | N/A       | N/A    | 4'X4'   | WYE        | 29.0     | 0.0           |               |
| 14       | 14+52.00 | 0+15.50 | RT | Emerson   | 100     | 10    | 9.8       | 0.50      | 14         | 2.45    | 12.0  | 0.0        | 12.0   | 13.1     | 0.90%       | 6" pbl  | 0.5           | 0.46    | 15        | 13.7   | 15      | STD.       | 11.0     | 1.0           | 15            |
| 15       | 10+87.50 | 0+15.50 | RT | Emerson   | 100     | 10    | 9.8       | 0.50      | 15         | 0.79    | 3.9   | 1.0        | 4.9    | 13.6     | 0.97%       | 6" pbl  | 0.5           | 0.18    | 15        | 5.4    | 10      | STD.       | 7.0      | 0.0           |               |
| 16       | 10+91.80 | 0+15.50 | LT | Emerson   | 100     | 10    | 9.8       | 0.50      | 16         | 2.24    | 11.0  | 0.0        | 11.0   | 11.6     | 0.70%       | 6" pbl  | 0.5           | 0.48    | 15        | 14.3   | 15      | STD.       | 12.5     | 0.0           |               |
| 17       | 24+64.00 | 0+32.00 | LT | Quail Run | 100     | 10    | 9.8       | 0.68      | 17,17A     | 0.55    | 3.7   | 0.0        | 3.7    | 3.8      | 1.56%       | 1/4"/ft | 0.24          | 0.23    | 12        | 11.2   | 10      | STD.       | 5.5      | 0.0           |               |
| 18       | 23+14.00 | 0+32.00 | LT | Quail Run | 100     | 10    | 9.8       | 0.68      | 18,18A     | 0.56    | 3.7   | 0.0        | 3.7    | 3.8      | 1.56%       | 1/4"/ft | 0.24          | 0.24    | 12        | 11.3   | 10      | STD.       | 5.5      | 0.0           | <i></i>       |
| 19       | 21+94.00 | 0+32.00 | LT | Quail Run | 100     | 10    | 9.8       | 0.68      | 19,19A     | 0.44    | 2.9   | 0.0        | 2.9    | 2.9      | 0.90%       | 1/4"/ft | 0.24          | 0.25    | 12        | 11.8   | 10      | STD.       | 5.8      | 0.0           |               |
| 20       | 20+74.00 | 0+32.00 | LT | Quail Run | 100     | 10    | 9.8       | 0.70      | 20,20A     | 0.40    | 2.8   | 0.0        | 2.8    | 2.9      | 0.90%       | 1/4"/ft | 0.24          | 0.23    | 12        | 11.1   | 10      | STD.       | 5.8      | 0.0           |               |
| 21       | 19+80.85 | 0+32.00 | LT | Quail Run | 100     | 10    | 9.8       | 0.72      | 21,21A     | 0.32    | 2.3   | 0.0        | 2.3    | 2.9      | 0.90%       | 1/4"/ft | 0.24          | 0.19    | 12        | 9.2    | 5       | STD.       | 2.5      | 0.0           |               |
| 22       | 0+80.04  | 0+20.50 | LT | Hays Road | 100     | 10    | 9.8       | 0.64      | 22         | 1.33    | 8.3   | 0.0        | 8.3    | 22.5     | 1.50%       | 0.3"/ft | 0.5           | 0.18    | 20        | 5.5    | 15      | STD.       | 11.5     | 0.0           | 1             |
| 23       | 27+24.31 | 0+32.00 | LT | Quail Run | 100     | 10    | 9.8       | 0.70      | 26,26A     | 0.43    | 2.9   | 0.0        | 2.9    | 2.1      | 0.50%       | 6" pbl  | 0.24          | 0.33    | 12        | 9.9    | 10      | STD.       | 6.8      | 0.0           | 1             |
| 24       | 5+25.00  | 0+00.00 | LT | Montrose  | 100     | 10.56 | 9.72      | 0.50      | D4,29      | 7.79    | 37.8  | 0.0        | 37.8   | 33.6     | 1.39%       | N/A     | 1.5           | 0.69    | N/A       | N/A    | 5'X5'   | WYE        | 53.8     | 0.0           |               |

| AS-BUILT SEPTEMBER 2018<br>INFORMATION PROVIDED<br>BY CONTRACTORS | - 7-  | 200 W. BE<br>ALLEN, TEXAS | IGINEERING, IN<br>ELMONT, SUITE E<br>75013 (972)396-12<br>FIRM *5951 |  |
|---|---|---------------------------|--|--|
| (NOT FIELD VERIFIED)  |   | DEVELOPMEN                | T PLANS FOR  |  |
|   |   | STONE                     | CREEK  |  |
|   |   | PHAS                      | E VIII   |  |
|   |   | ROCKWALI                  | L, TEXAS   |  |
| ATE OF TETA   |   |                           | OUL ATIONS   |  |
|   |   | DRAINAGE CAL              | CULATIONS  | ************************************** |
| BRANDON DAVIDSON  | та та стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>Стана<br>С<br>С<br>С<br>С<br>С<br>С<br>С<br>С<br>С<br>С<br>С<br>С<br>С<br>С<br>С<br>С<br>С<br>С | 2 2 2                     |  |  |
| 87682<br>9 AC STERED  | DRAWN BY  | DESIGNED BY               | CHECKED BY   | SHEET NO.                              |
| SSI ONAL ENDER WILL   | JOB NUMBER  | DATE                      | SCALE:   | 10 - 70                                |
| girti   | 16044   | OCTOBER 2016              |  | 18 of 32                               |



|  | 24" RCP<br>Q <sub>100</sub> = 26.6 cfs   |  | 18" RCP   |  |
|--|--|--|---|--|
| X. 30" RCP         0= 26.5 cfs         0= 5.4 fps         = 0.0042         P= 29.0 cfs | $     \begin{array}{r}                                     $                             | 522.47<br>523.20   | $Q_{100}$ = 11.0 cfs<br>V <sub>100</sub> = 8.4 fps<br>S = 0.0110<br>CAP= 13.2 cfs |  |
| 'D-2' HG-520.72  | D-2' HG-521.37<br>D-2' HG-521.52<br>TING INLET HG-521.58<br>F TO EX. PIPE                | -2'= Ho.<br>2A & D2B Ho.<br>-2'  |   | EXISTING<br>GRADE  |
| 0+00.00 LINE   |  | 1+00.50 LINE 'D<br>0+00.00 LAT D:<br>1+03.50 LINE 'D<br>END 24" RCP<br>BEGIN 18" RCP | PROPOSED GRADE  |  |
|  | EXISTING<br>GRADEHGL<br>EXISTING<br>30" RCP<br>© 0.50%<br>EXISTING<br>30" RCP<br>© 1.59% |  | 18" RCP @ 1.59  | <u>/.</u><br>  |
| 30" FL+518.00  | 30" FL=518.18  | 24" FL=519.70  |   |  |
|  |  |  | LINE 'D-2'  |  |
|  |  |  |   | AS-BUILT SEPTE<br>INFORMATION F<br>BY CONTRA<br>(NOT FIELD V |
| 0.   | +00  | 1+00 2+  | -00 3+00  | 4+00   |

| ER CURVE   | DATA        |             |             |
|------------|-------------|-------------|-------------|
| 2          | 3           | 4           | 5           |
| 2° 02'33'' | 12° 34'28'' | 08° 16'07'' | 43° 27'28'' |
| 65.00'     | 1510.00'    | 415.00'     | 65.00'      |
| 24.98'     | 166.37'     | 30.00'      | 25.90'      |
| 47.70'     | 331.39'     | 59.89'      | 49.30'      |
|            |             |             |             |

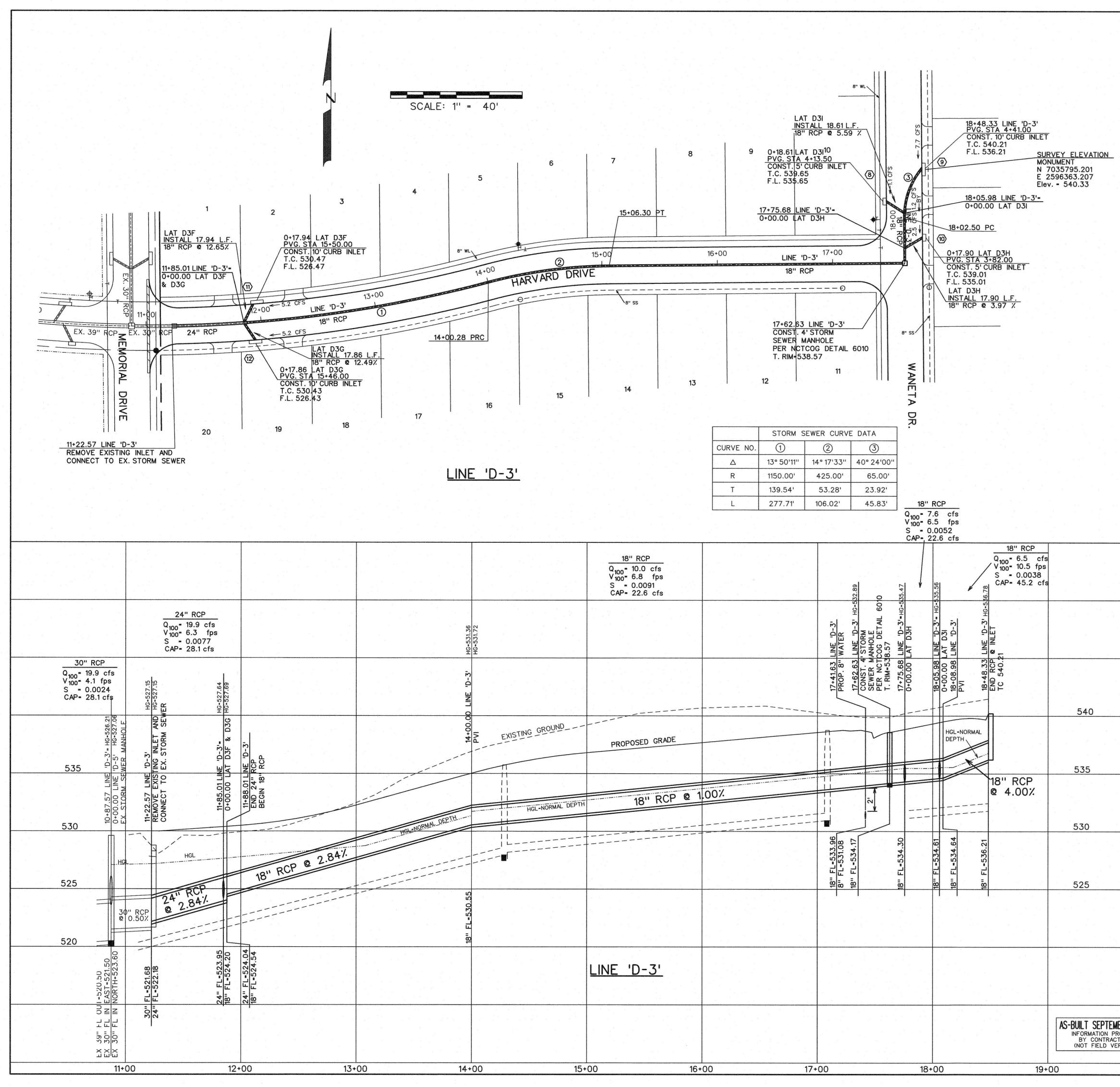
| B    | _              | BLOCK LABEL    |
|------|----------------|----------------|
| (19) | -              | INLET NUMBER   |
| 1    | <del>,</del> " | CURVE NUMBER   |
|      | -              | SANITARY SEWER |
|      | ÷              | WATER          |

LEGEND

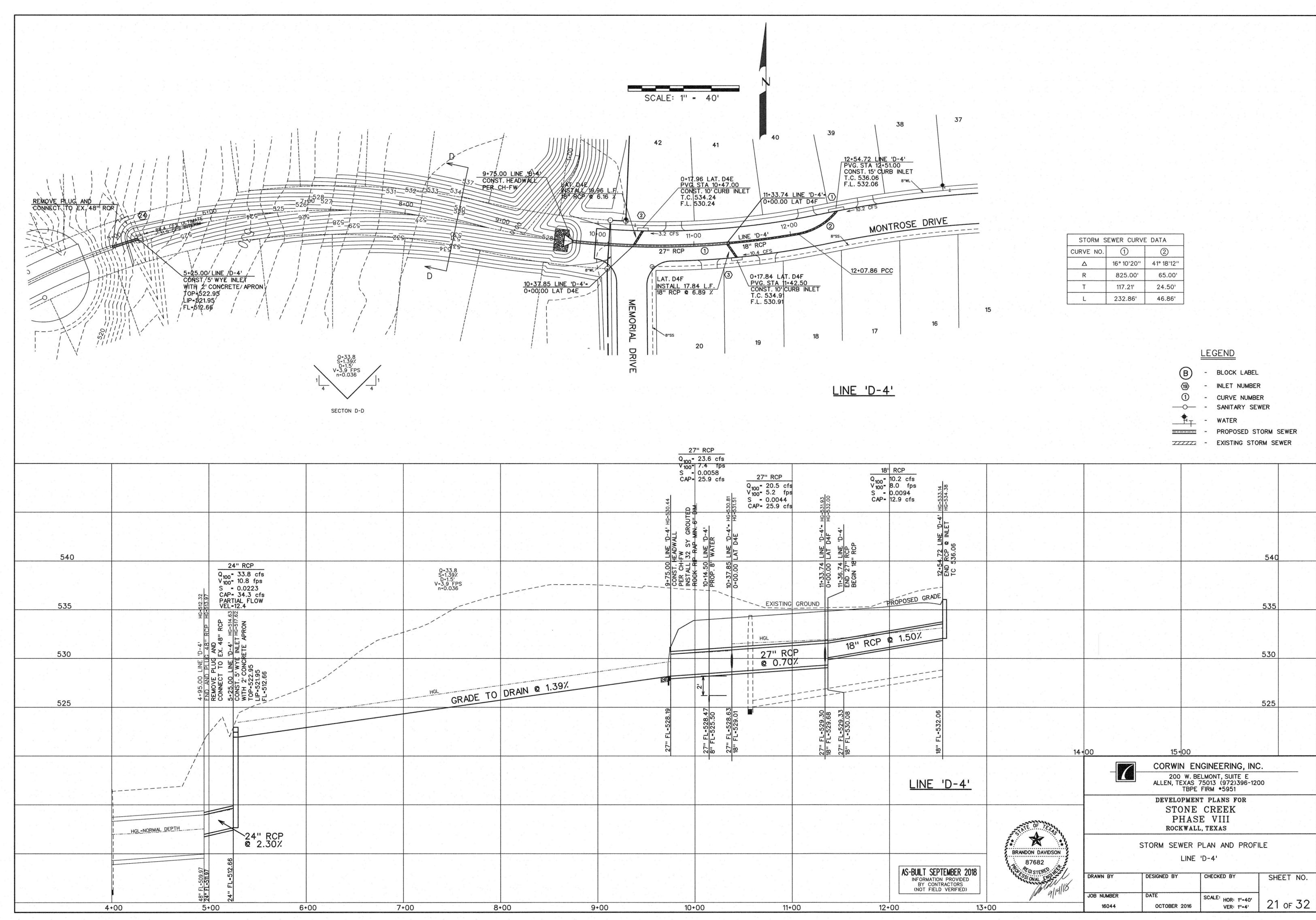
PROPOSED STORM SEWER

ZZZZZ - EXISTING STORM SEWER

|   | F                         |                     |                                   | and the second |           |
|---|---------------------------|---------------------|-----------------------------------|--|-----------|
| <u>28.70</u>                                      |                           |                     |                                   |  |           |
| LINE 'D-2' HG-527.33<br>P @ INLET HG-528.70<br>20 |                           |                     |                                   |  |           |
| 1<br>4+77.10<br>END RCF<br>TC 530.                |                           |                     |                                   |  |           |
|   | 530                       |                     |                                   |  |           |
|   | 525                       |                     |                                   |  |           |
|   | 520                       |                     |                                   |  |           |
| 18" FL-526.20                                     |                           |                     |                                   |  |           |
| 18  | 515                       |                     |                                   |  |           |
|   |                           |                     | 200 W. BI<br>ALLEN, TEXAS<br>TBPE | IGINEERING, INC<br>ELMONT, SUITE E<br>75013 (972)396-120<br>FIRM *5951   |           |
|   | STATE OF TEXTON           |                     | STONE                             | CREEK<br>E VIII  |           |
|   | BRANDON DAVIDSON<br>87682 |                     | STORM SEWER F<br>LINES 'D         | PLAN AND PROFI<br>)-1'& 'D-2'  | _E        |
| EMBER 2018<br>PROVIDED<br>RACTORS<br>VERIFIED)    | CONTERCONNEL ENT          | DRAWN BY            | DESIGNED BY                       | CHECKED BY   | SHEET NO. |
|   | 00                        | JOB NUMBER<br>16044 | DATE<br>OCTOBER 2016              | SCALE: HOR: 1"-40'<br>VER: 1"-4'   | 19 ог 32  |
|   |                           |                     |                                   |  |           |

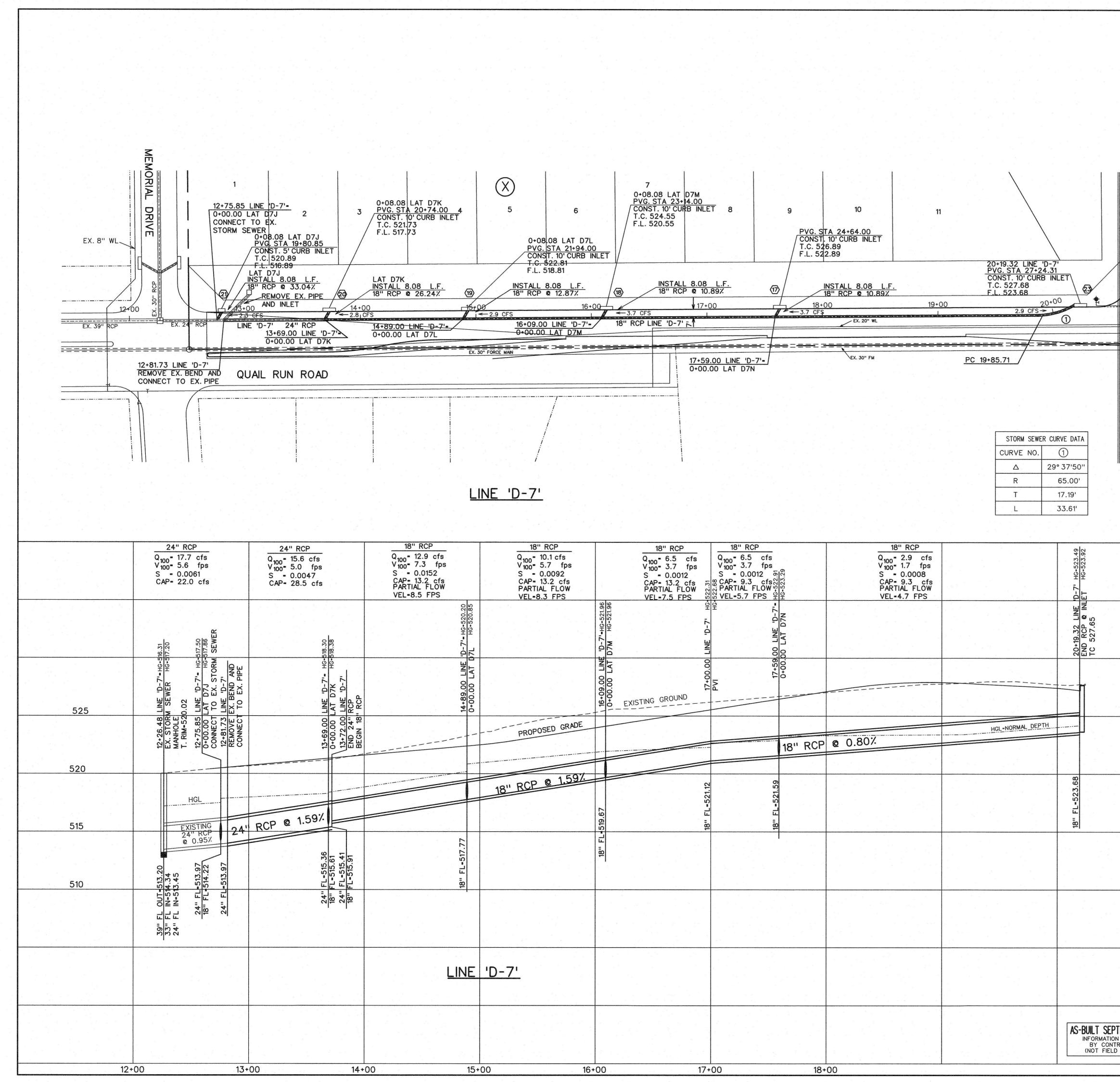


|                              |                           |                     | $\begin{array}{c} \textcircled{1} \\ \textcircled{1} \\ \hline \\ $ | OCK LABEL<br>ET NUMBER<br>IRVE NUMBER<br>NITARY SEWER<br>ATER<br>OPOSED STORM SEVE<br>ISTING STORM SEWE |           |
|------------------------------|---------------------------|---------------------|---|---|-----------|
|                              |                           |                     |   |   |           |
|                              |                           |                     |   |   |           |
|                              |                           |                     |   |   |           |
|                              |                           |                     |   |   |           |
|                              |                           |                     |   |   |           |
|                              |                           |                     |   |   |           |
|                              |                           |                     |   |   |           |
|                              |                           |                     |   |   |           |
|                              |                           |                     |   |   |           |
|                              |                           | -7                  |   | NGINEERING, ING<br>BELMONT, SUITE E<br>75013 (972)396-120<br>FIRM *5951                                 |           |
|                              | STATE OF TELS             |                     | STONE<br>PHAS   | nt plans for<br>CREEK<br>SE VIII<br>l, texas  |           |
| D 0010                       | BRANDON DAVIDSON<br>87682 | S                   |   | LAN AND PROFILE<br>'D-3'  |           |
| R 2018<br>IDED<br>RS<br>IED) | SSIONAL ENGLACE           | DRAWN BY            | DESIGNED BY   | CHECKED BY  | SHEET NO. |
|                              | In glott.                 | JOB NUMBER<br>16044 | DATE<br>OCTOBER 2016  | SCALE: HOR: 1"-40'<br>VER: 1"-4'  | 20 of 32  |

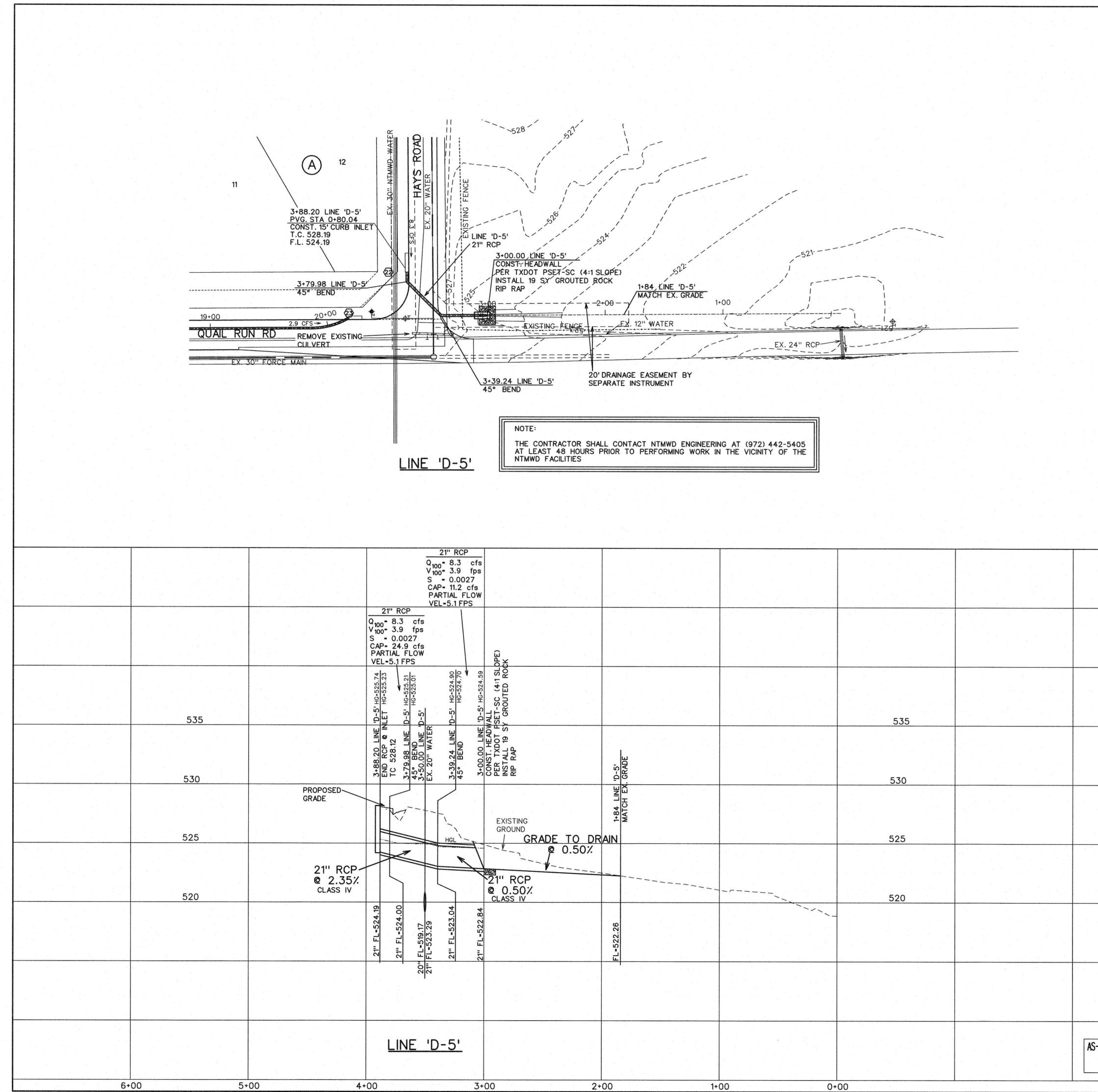


|                       |               |      | 27"<br>Q100= 2  | RCP<br>3.6 cfs   |   |   |  |
|-----------------------|---------------|------|---|--|---|---|--|
| .8<br>97<br>FPS<br>36 |               |      | 9+75.00 LINE 'D-4' HG-530.44<br>CONST. HEADWALL<br>PER CH-FW<br>I INSTALL 32 SY GROUTED & A 000<br>ROCK RP RAP MIN. 6" DIM. | 10+14.50 LINE 'D-4'<br>PROP. 8' WATER<br>10+37.85 LINE 'D-4'= HG-530.81<br>0+00.00 LAT D4E HG-530.81 | 27" RCP<br>Q <sub>100</sub> = 20.5 cfs<br>V <sub>100</sub> = 5.2 fps<br>S = 0.0044<br>CAP= 25.9 cfs | Image: 11+33.74         LINE         'D-4'=         HG-531.93           0+00.00         LAT         D4F         HG-532.00           11+36.74         LINE         'D-4'           END         27''         RCP           BEGIN         18''         RCP | 18'         RCP           Q100 =         10.2 cfs           V100 =         8.0 fps           S =         0.0094           CAP =         12.9 cfs           H-Q         12.9 cfs |
| TADE TO               | DRAIN @ 1.39% |      | 5.  |  | HGL<br>HGL<br>27" RCP<br>@ 0.70%  | 18" F   | RCP @ 1.50%  |
| GRADE 10              |               |      | 27" FL-528.19   | 27" FL=528.47<br>8" FL=525.50<br>27" FL=528.63<br>18" FL=529.01                                      |   | 27" FL=529.30<br>18" FL=529.68<br>27" FL=529.33<br>18" FL=530.08  | 18" FL=532.06  |
|                       |               |      |   |  |   |   | LINE '   |
| 8-                    | •00           | 9+00 | 10+00   | )  | 11+00   |   | AS-BUILT SEPTE<br>INFORMATION<br>BY CONTRA<br>(NOT FIELD )   |
|                       |               |      | 10 00   | an a   |   |   |  |

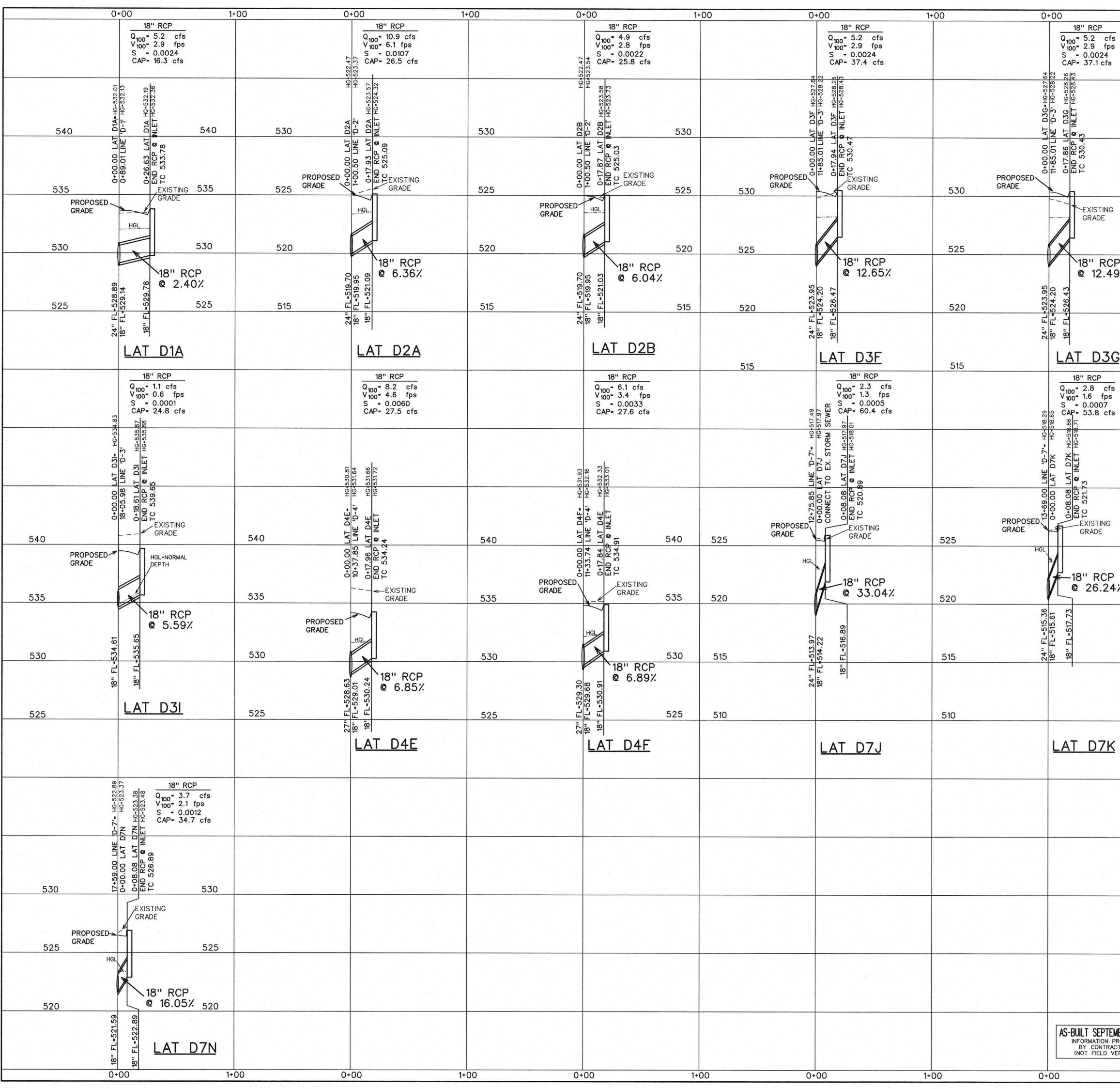
| STORM    | SEWER CURV  | E DATA      |
|----------|-------------|-------------|
| CURVE NO | ). (1)      | 2           |
| Δ        | 16° 10'20'' | 41° 18'12'' |
| R        | 825.00'     | 65.00'      |
| Т        | 117.21'     | 24.50'      |
| L        | 232.86'     | 46.86'      |



| 6<br>+08.08 LAT D7L<br>VG. STA 21+94.00<br>ONST. 10' CURB INL<br>C. 522.81<br>L. 518.81<br>LL 8.08 L.F.<br>CP @ 12.87%<br>16+00<br>L<br>9.00 LINE 'D-7'- |  | 9 10 11<br>PVG. STA 24+64.00<br>CONST. 10' CURB INLET<br>T.C. 526.89<br>F.L. 522.89<br>INSTALL 8.08 L.F.<br>18" RCP @ 10.892<br>18+00 19+00<br>EX. 20" WL | 20+19.32 LINE 'D-7'<br><u>PVG. STA 27+24.31</u><br>CONST. 10' CURB INLET<br>T.C. 527.68<br>F.L. 523.68<br>20+00                                   |                     |  | $\frac{1}{20 40} = 80$   |
|--|--|---|---|---------------------|--|--|
|  |  |   | PC 19+85.71   | =====               |  |  |
| 71   |  |   | STORM SEWER CURVE DATA         CURVE NO.       ①         △       29° 37'50''         R       65.00'         T       17.19'         L       33.61' |                     |  | B       -       BLOCK LABEL         Image: Second stress       -       -         Image: Second stress       -       -         Image: Second stress       -       -         Image: Stress <td< th=""></td<> |
| B" RCP<br>10.1 cfs<br>5.7 fps<br>0.0092<br>13.2 cfs<br>TIAL FLOW<br>8.3 FPS  | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$            | 18" RCP           Q100 = 2.9 cfs           V100 = 1.7 fps           S = 0.0008           CAP = 9.3 cfs           PARTIAL FLOW           VEL = 4.7 FPS     | -7' HG=523.49<br>F HG=523.92  |                     |  |  |
|  | LINE 'D-7' -HG-521.96<br>LAT D7M HG-521.96<br>D.00 LINE 'D-7' HG | Y     VEL-4.7 FPS       -V-1     -V-2       -V-1     -V-2       -V-1     -V-2   | 20+19.32 LINE 'D-<br>END RCP @ INLET<br>TC 527.65   | 530                 |  |  |
|  | 00.00<br>00.00<br>EXISTING GROUND<br>EXISTING GROUND             |   |   | 525                 |  |  |
| DOSED GRADE  |  | 18" RCP @ 0.80%   | HGL-NORMAL_DEPTH  | 520                 |  |  |
| <u>e 1.59%</u>   | 8" FL-521.12   | 8" FL=521.59  | 18" FL=523.68   | 515                 |  |  |
| Ĩ  |  |   |   |                     |  |  |
|  |  |   |   | 510                 |  | CORWIN ENGINEERING, INC.<br>200 W. BELMONT, SUITE E<br>ALLEN, TEXAS 75013 (972)396-1200<br>TBPE FIRM *5951   |
|  |  |   |   |                     | STATE OF TEAM  | DEVELOPMENT PLANS FOR<br>STONE CREEK<br>PHASE VIII<br>ROCKWALL, TEXAS  |
|  |  |   | AS-BUILT SEPT   | TEMBER 2018         | BRANDON DAVIDSON<br>87682<br>99. FEGISTERED<br>SSI ONAL ENGL | STORM SEWER PLAN AND PROFILE<br>LINE 'D-7'<br>DRAWN BY DESIGNED BY CHECKED BY SHEET NO.  |
| 16+0   | 0 17+00  | 18+00   | INFORMATION<br>BY CONTI<br>(NOT FIELD   | ACTORS<br>VERIFIED) | MAL TUNIU  | JOB NUMBER DATE SCALE: HOR: 1"-40' 22 OF 32  |

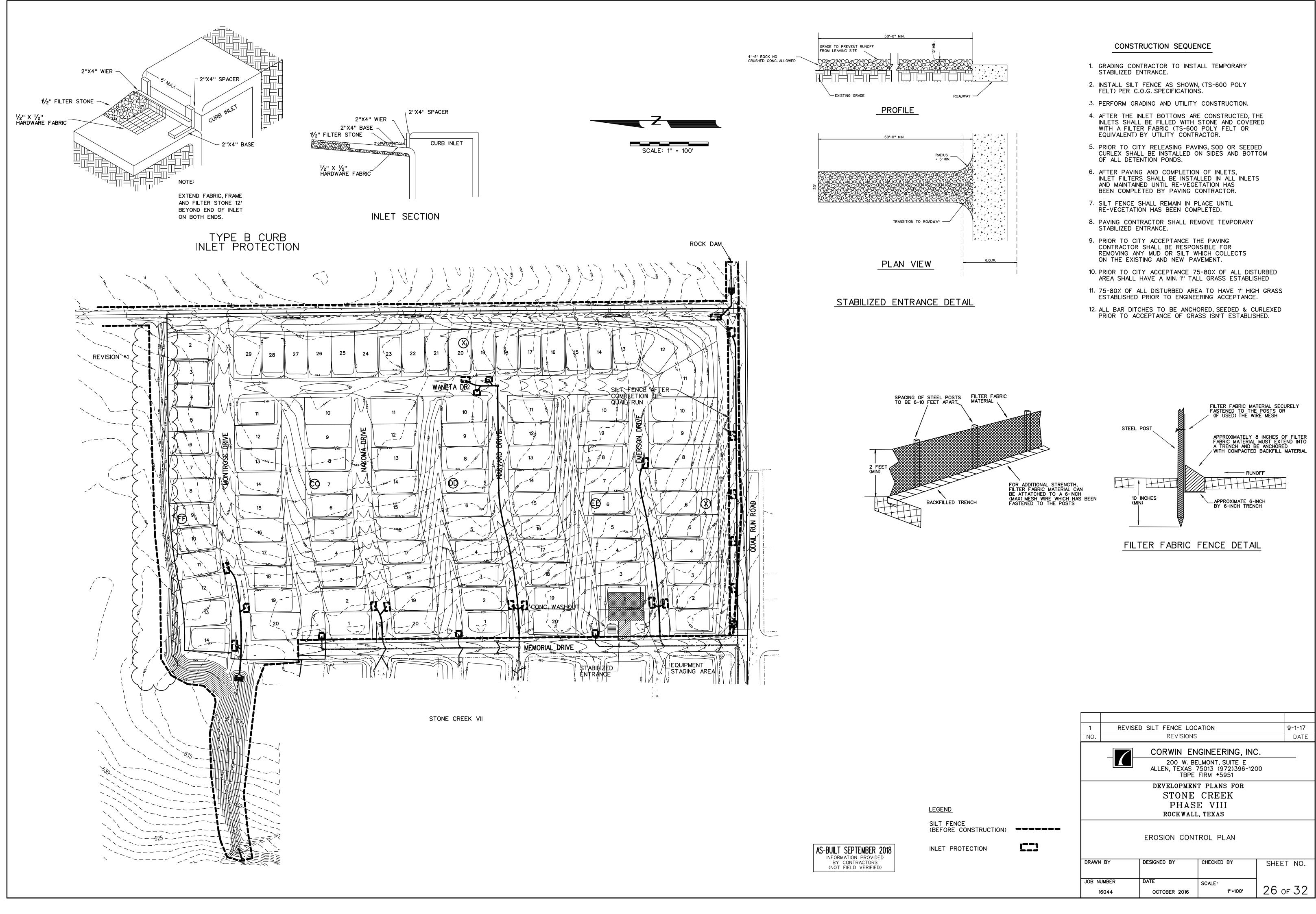


| 50<br>SC (4:1 SLOPE)<br>ROUTED ROCK<br>1+84_LINE 'D-5'<br>-2+00 - MAJCH EX. GRADE<br>-2+00 - HOL<br>ENCE<br>-2+00 - HOL<br>- | EX. 24" RCP |     | 0 20 40 8<br>SCALE: 1" - 40'  | ο   |                        | B   | EGEND<br>- BLOCK LABEL<br>- INLET NUMBER  |           |
|--|-------------|-----|---|---|------------------------|---|---|-----------|
|  |             |     |   |   |                        |   | - CURVE NUMBER<br>- SANITARY SEWER<br>- WATER<br>- PROPOSED STORM<br>- EXISTING STORM | M SEWER   |
|  |             |     |   |   |                        |   |   |           |
| Ш  |             | 535 |   |   |                        |   |   |           |
| MATCH EX. GRADI  |             | 530 |   |   |                        |   |   |           |
|  |             | 520 |   |   | - 7                    | 200 W.<br>ALLEN, TEXAS<br>TBP                 | ENGINEERING, ING<br>BELMONT, SUITE E<br>5 75013 (972)396-12<br>PE FIRM *5951          |           |
|  |             |     | AC-RIIII T CEDTEMDED 2010   | BRANDON DAVIDSON<br>87682                             |                        | STON<br>PHA<br>ROCKWA<br>ORM SEWER PL<br>LINE |   |           |
|  |             |     | AS-BUILT SEPTEMBER 2018<br>INFORMATION PROVIDED<br>BY CONTRACTORS<br>(NOT FIELD VERIFIED) | 87682<br>80. PEGISTERED<br>SSIONAL ENGLISH<br>9/14/16 | DRAWN BY<br>JOB NUMBER | DESIGNED BY                                   | CHECKED BY<br>SCALE: HOR: 1"-40'  | SHEET NO. |



| Image: Section of the sectio | 1+                              | 00           | 0+00  | 1+00  |  |           |
|---|---------------------------------|--------------|---|---|--|-----------|
| Sign Sign Sign Sign Sign Sign Sign Sign   | 5                               |              | 18" RCP<br>Q <sub>100</sub> = 2.5 cf<br>V <sub>100</sub> = 1.4 fp | s<br>s  |  |           |
| 530         540         540         540           S25         535         535         535           9/4         S20         530         535           9/4         S20         530         S37           520         530         S37         S30           521         S20         530         S30           522         530         S30         S30           520         530         S30         S30           520         530         S30         S30           520         530         S30         S30           520         S30         S30         S30           521         S40         S40         S40           533         S40         S40         S40           540         S40         S40         S40           541         S40         S40         S40           542         S40         S40         S40           543         S40         S40         S40           544         S40         S40         S40           545         S40         S40         S40           545         S40         S40         S40   |                                 |              | 03H-<br>10-3"<br>NLET +   |   |  |           |
| Processo   |                                 | 530 540      | 0+00.00 L<br>7+75.68<br>0+17.90<br>END RCP<br>END RCP             | NG  | 540  |           |
| P         S20         530         S30           520         530         530         530         530           515         515         515         530         530           515         515         515         515         515           520         515         515         515         515           515         515         515         515         515           520         525         525         525         525           525         525         525         525         525           520         525         525         525         525           525         525         525         525         525           520         525         525         525         525           515         515         515         515         515           515         515         515         515         515           515         515         515         515         515           515         515         515         515         515           515         515         515         515         515           516         517         518 <td< td=""><td></td><td>ROPO</td><td></td><td></td><td></td><td></td></td<>   |                                 | ROPO         |   |   |  |           |
| G         515         LAT_D3H           5         5         0000         000         000  | P<br>9%                         | 525 535      | @ 3.9   | CP<br>7%  | 535  |           |
| 515         19" RCP<br>Quer 2.9 cits<br>S.* 0.000<br>GRADE         19" RCP<br>Quer 3.7 cits<br>S.* 0.000<br>GRADE         10" Cuer 3.7 cits<br>S.* 0.000<br>GRA  |                                 | 520 530      |   |   | 530  |           |
| Image: State in the s | <u>G</u>                        | 515          | 18" RCP   | 18'   | <u>' RCP</u><br>3.7 cfs                        |           |
| S25         PROPOSED<br>GRADE         PROPOSED<br>GRADE         PROPOSED<br>GRADE         PROPOSED<br>GRADE         CALL         PROPOSED<br>GRADE         CORVIN         EVENTION<br>GRADE         CALL         PROPOSED<br>GRADE         CORVIN         CALL         CALL <thcall< th=""> <thcall< th="">         CALL         <t< td=""><td>5</td><td></td><td><u>6</u>0</td><td></td><td>2.1 fps<br/>0.0012<br/>34.7 cfs</td><td></td></t<></thcall<></thcall<>   | 5                               |              | <u>6</u> 0  |   | 2.1 fps<br>0.0012<br>34.7 cfs                  |           |
| S25         S25 <td></td> <td></td> <td>NE 'D-7'-<br/>T D7L<br/>INLET HG</td> <td></td> <td></td> <td></td>   |                                 |              | NE 'D-7'-<br>T D7L<br>INLET HG                                    |   |  |           |
| PROPOSED<br>GRADE         EXISTING<br>ORADE         ORADE         HIG         ORADE           520         18" RCP<br>© 10.89%         18" RCP<br>© 10.89%         520           515         10         10         10         10           510         10         10         10         10         10           510         10         10         10         10         10           510         10         10         10         100         100           510         10         10         10         100         100           510         10         10         100         100         100           510         10         10         100         100         100           510         10         10         100         100         100           510         10         100         100         100         100           510         10         100         100         100         100           510         10         100         100         100         100           510         100         100         100         100         100           500         100         100  |                                 | 525          | 14+89.00 L<br>0+00.00 L/<br>0+08.08 L<br>END RCP<br>TC 522.81     | 16+09.00<br>0+00.00 L<br>0+08.08 L<br>END RCP           | n an ann an ann an ann an an an an an an       | 5         |
| 515         515         515         515           510         510         510         510         510           510         510         510         510         510           6         LAT_D7L         LAT_D7M         510           0         000         1+00         1+00           0         000         1+00         1+00           0         000         1+00         1+00           0         000         1+00         1+00           0         000         1+00         1+00           0         000         1+00         1+00           0         000         1+00         1+00           0         000         1+00         1+00           0         000         1+00         1+00           0         000         1+00         1+00           0         000         1+00         1+00           0         000         1+00         1+00           0         000         1+00         1+00           0         000         1+00         1+00           0         000         000         1+00           0  | ,<br>4 <i>%</i> .               | GR           | ADE GRADE   | GRADE HGL   | GRADE  | 5         |
| 510     510     510     510       LAT_D7L     LAT_D7M       LAT_D7L     LAT_D7M       0,00     1+00       0,00     1+00       0,00     1+00       0,00     1+00       0,00     1+00       0,00     1+00       0,00     1+00       0,00     1+00       0,00     1+00       0,00     1+00       0,00     1+00       0,000     1+00  |                                 | 515          |   | 10  | 515  | 5         |
| 0         00         1+00         1+00           0         00         1+00         1+00           0         00         1+00         1+00           0         000         1+00         1+00           0         000         1+00         1+00           0         000         0+00         1+00           0         000         0+00         1+00           0         000         0+00         1+00           0         000         0+00         1+00           0         000         0+00         1+00           0         000         0+00         0+00           0         000         0+00         0+00           0         000         0+00         0+00           0         0+00         0+00         0+00           0         0+00         0+00         0+00           0         0+00         0+00         0+00   |                                 | 510          |   | 18" F   | 51(  |           |
| 0400       1+00         CORWIN ENGINEERING, INC.       200 w. BELMONT, SUITE E         ALLEN, TEXAS 75013 (972)396-1200       TBPE FIRM *5951         DEVELOPMENT PLANS FOR       STONE CREEK         PHASE VIII       ROCK WALL, TEXAS         BRANDON DAVIDSON       STORM SEWER PROFILES         BRANDON DAVIDSON       BRANDON DAVIDSON         BRANDON DAVIDSON       BRANDON DAVIDSON         BRANDON DAVIDSON       STORM SEWER PROFILES         BRANDON DAVIDSON       BRANDON DAVIDSON         BRANDON DAVIDSO   | 2                               |              | LAT D7L   | <u>LA</u>   | <u>[ D7M</u>                                   |           |
| 0400       1+00         CORWIN ENGINEERING, INC.       200 w. BELMONT, SUITE E         ALLEN, TEXAS 75013 (972)396-1200       TBPE FIRM *5951         DEVELOPMENT PLANS FOR       STONE CREEK         PHASE VIII       ROCK WALL, TEXAS         BRANDON DAVIDSON       STORM SEWER PROFILES         BRANDON DAVIDSON       STORM SEWER PROFILES         DRAWN BY       DESIGNED BY       CHECKED BY         JOB NUMBER       DATE       SQALE: URD: 10.00   |                                 |              |   |   |  |           |
| MBER 2018         PROVIDED<br>(CTORS         PROVIDED<br>(CTORS         VERFED)   |                                 |              | 0+00  | 1+00  |  |           |
| MBER 2018<br>PROVIDED<br>ACTORS<br>VERIFIED)  |                                 |              |   | CORWIN ENG<br>200 W. BELM<br>ALLEN, TEXAS 75<br>TBPE FI | MONT, SUITE E<br>013 (972)396-1200<br>RM *5951 |           |
| MBER 2018<br>PROVIDED<br>ACTORS<br>VERIFIED)  |                                 | STATE OF TEL | S. C.                         | STONE O<br>PHASE  | CREEK<br>VIII                                  |           |
| JOB NUMBER DATE SCALE: HOP, 14 401  | MBER 2018<br>PROVIDED<br>ACTORS | 87682        |   |   |  | SHEET NO. |
|   |                                 | 110911       |   |   | CALE: HOR: 1"-40'<br>VER: 1"-4'                | 24 of 32  |





Regulatory signs should be used only where justified by engineering judgment. All signage plans shall be reviewed and approved by the City of Rockwall Engineering Division and be designed in accordance with the principles described in the current Texas Manual on Uniform Traffic Control Devices (TMUTCD).

All street and regulatory signage shall be installed, inspected and approved, prior to final acceptance of the project. This inspection typically takes place as part of the Engineering Division5/32s final walkthrough. Any sign related issue/issues will be noted on the projects final punch list.

A. A detailed street and regulatory signage plan is to be submitted to the City of Rockwall Engineering Division. All signs shall be shown in the engineering plans for review and approval. The signage plan shall be shown on a separate signage & pavement marking layout sheet or as a part of the plan & profile sheet. The plan shall identify the specific sign designation, size and location for each sign. Sign standards shall also be included in the engineering plans.

B. All signage installed shall comply with the current Texas Manual on Uniform Traffic Control Devices and the Standard Highway Sign Designs for Texas. The sign layout drawings shall show the color and dimensions

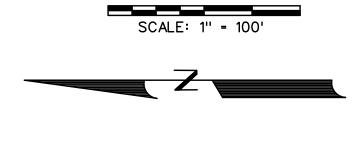
of all sign face legend components including background color, legend color, borders, symbols, letter size and style. C. The developer shall be responsible for furnishing and installing all regulatory signage, warning signage and street name signage along with all necessary sign mounts in accordance with the approved engineering plans. A sample production sign shall be submitted to the Traffic Signs & Pavement Markings Supervisor for review and approval. The sample shall be directed to the City of Rockwall Service Center located at 1600 Airport Road, Rockwall Texas 75087. The sample sign must be submitted at least 10 days prior to the scheduled installation date.

D. For a street with a cul-de-sac end, a standard W 14-2a shallbe mounted over the street name blade, if the cul-de-sac is not clearly visible from the adjoining roadway, or is located in excess of 400 linear feet from the adjoining roadway. E. Sign posts shall be  $2\frac{3}{8}$ O.D. galvanized steel tube sign post with a galvanized finish.

F. Sign clamps and brackets shall be high strength aluminum.



FUTURE CONSTRUCTION



B. Street Name Blades shall be nine-inch (9") tall flat aluminum. The blades shall be 0.080 inches thick and be a minimum of 36" long.

D. The street sign blade must incorporate the current City of Rockwall logo. The logo shall consist of white Scotchlite Series 3930 high intensity prismatic material. (Product Code 3930)

E. Block Numbers are required on all street name blades and shall be located on the top right corner of the street blade.

F. The lettering for the street blades shall be composed of a combination of lower-case letters with initial upper-case letters. The Clearview TCAD-1W font shall be used. The lettering shall be composed of initial upper-case letters of at least 6 inches in height and lower case letters of at least 4.5 inches in height. For supplementary lettering to indicate the type of street

(such as Street, Avenue or Road) shall be composed of initial upper-case letters at least 3-inches in height and lower-case letters at least 2.25 inches in height. Abbreviations may be used (for example St., Ave., or Rd) except the street name itself. The supplementary lettering shall be located at the lower right corner of the street blade, under the block number.

G. The street blade sign shall consist of green Scotchlite 3930 high intensity prismatic material background (product code 3937) and white Scotchlite 3930 high intensity prismatic material for the lettering (product code 3930). The background sheeting shall be white 3M 3990 high intensity prismatic material. The background material shall be applied to the full width and height of the sign blank leaving no metal exposed. The background material shall be one continuous piece of material. Patching of background material is not allowed and any sign with patching material of any type will be rejected by the City.

Alternative Option: As an alternative, the foreground color may be green transparent Scotchlite ElectroCut1177 film (E.C. film). Lettering shall be cut out and removed producing a single continuous piece of green transparent film material.

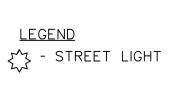
Street address markers shall be installed for each lot in the subdivision. The markers shall be located at the center of the lot on the face of the cyrbs. The address markers shall have a deep green background with reflective white numbers. The number size shall be four (4) indhes in height. The background of the address marker shall be eighteen (18) inches in length and from the top of curb to the gutter flow line. The address marker shall show the full numerical portion of the address of the lot.

approved on engineering plans.

A. Street name sign blades shall be double-sided with rounded corners.

C. The lettering for the street signs shallbe 3M 3930 high Intensity prismatic material sheeting for street, regulatory and warning signs and shallbe high intensity diamond grade type III prismatic. The street sign background shallbe green and the legend shallbe white.

All signage for multifamily, commercial, retail and industrial developments are required to have a separate permit from the building department. Signs, including any overhangs, are not allowed in any right-of-ways and/or easements. Location of any signage is not





- STREET NAME BLADE

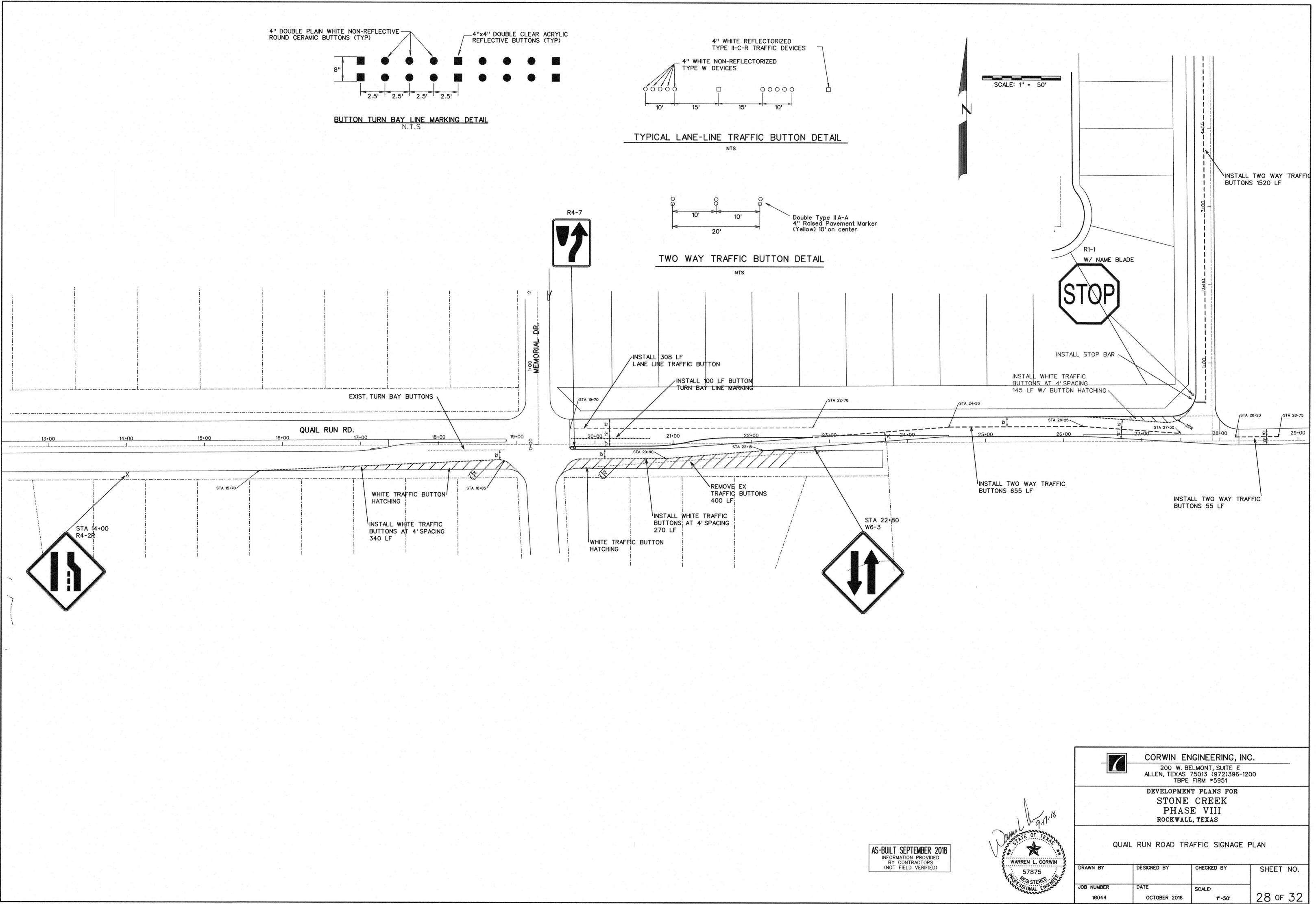
CORWIN ENGINEERING, INC. 200 W. BELMONT, SUITE E ALLEN, TEXAS 75013 (972)396-1200 TBPE FIRM **\***5951 DEVELOPMENT PLANS FOR

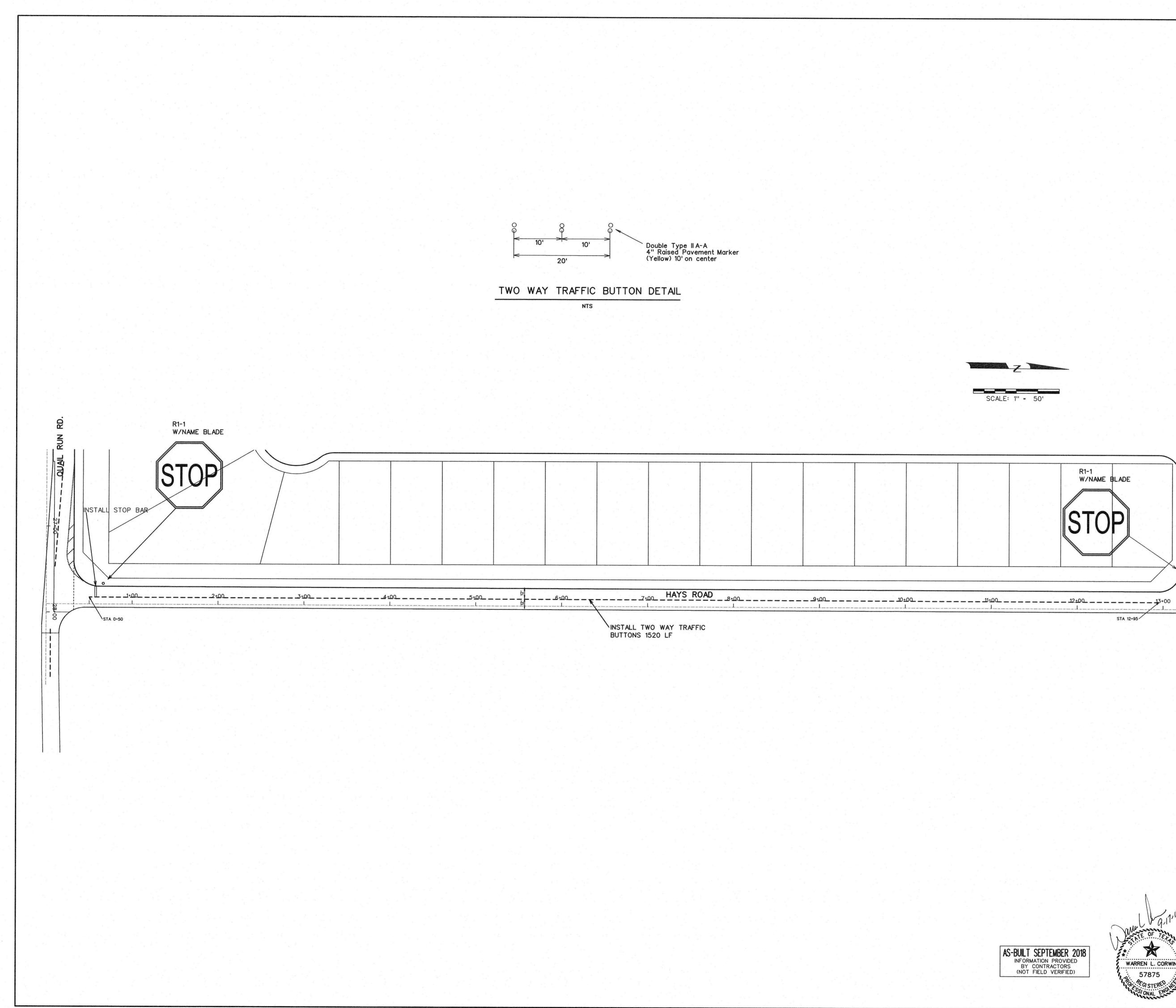
STONE CREEK PHASE VIII ROCKWALL, TEXAS

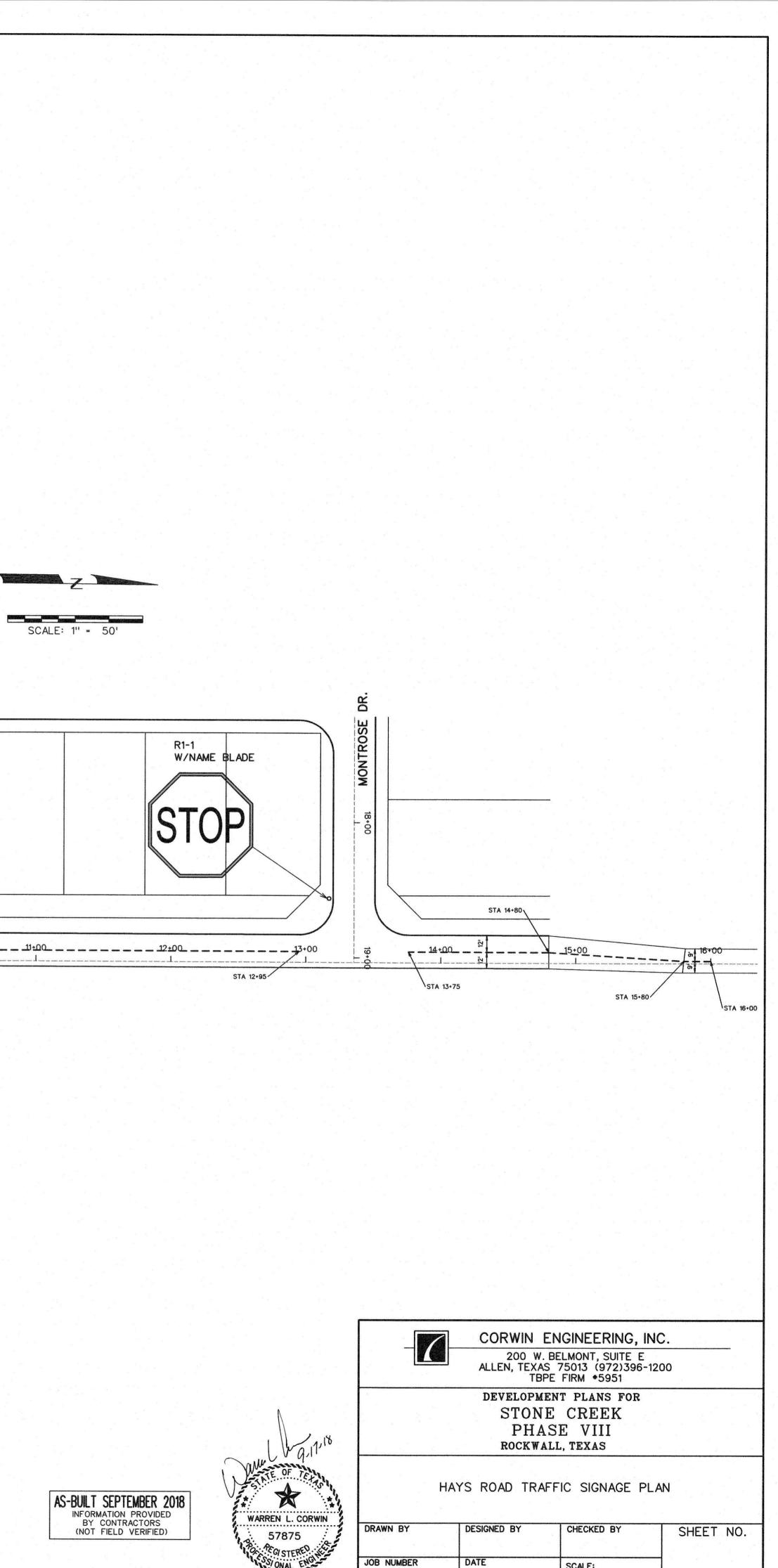
SIGN AND LIGHT PLAN

| DRAWN BY   | DESIGNED BY  | CHECKED BY | SHEET NO. |
|------------|--------------|------------|-----------|
|            |              |            |           |
| JOB NUMBER | DATE         | SCALE:     |           |
| 16044      | OCTOBER 2016 | 1''=100'   | 27 of 32  |

AS-BUILT SEPTEMBER 2018 INFORMATION PROVIDED BY CONTRACTORS (NOT FIELD VERIFIED)

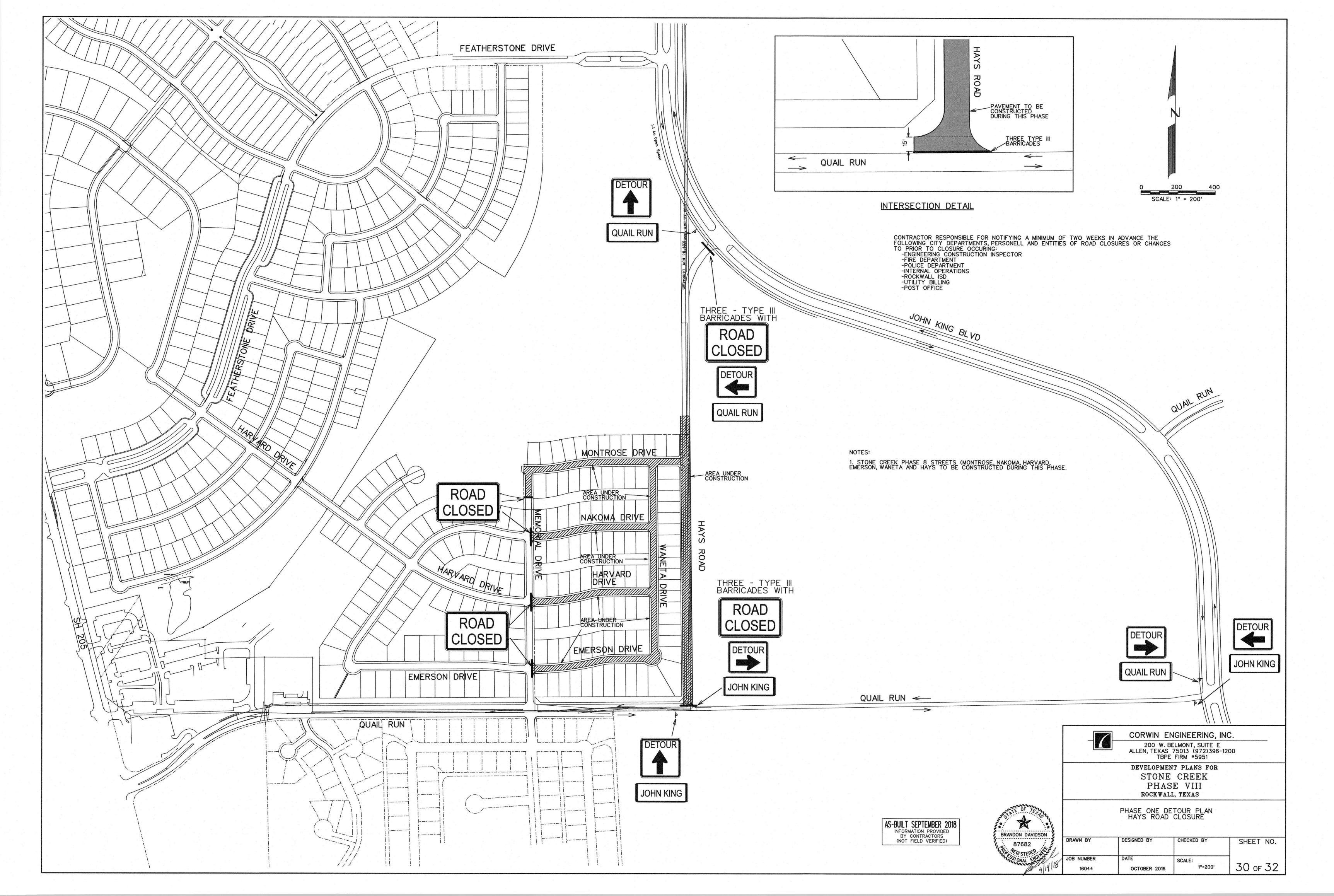


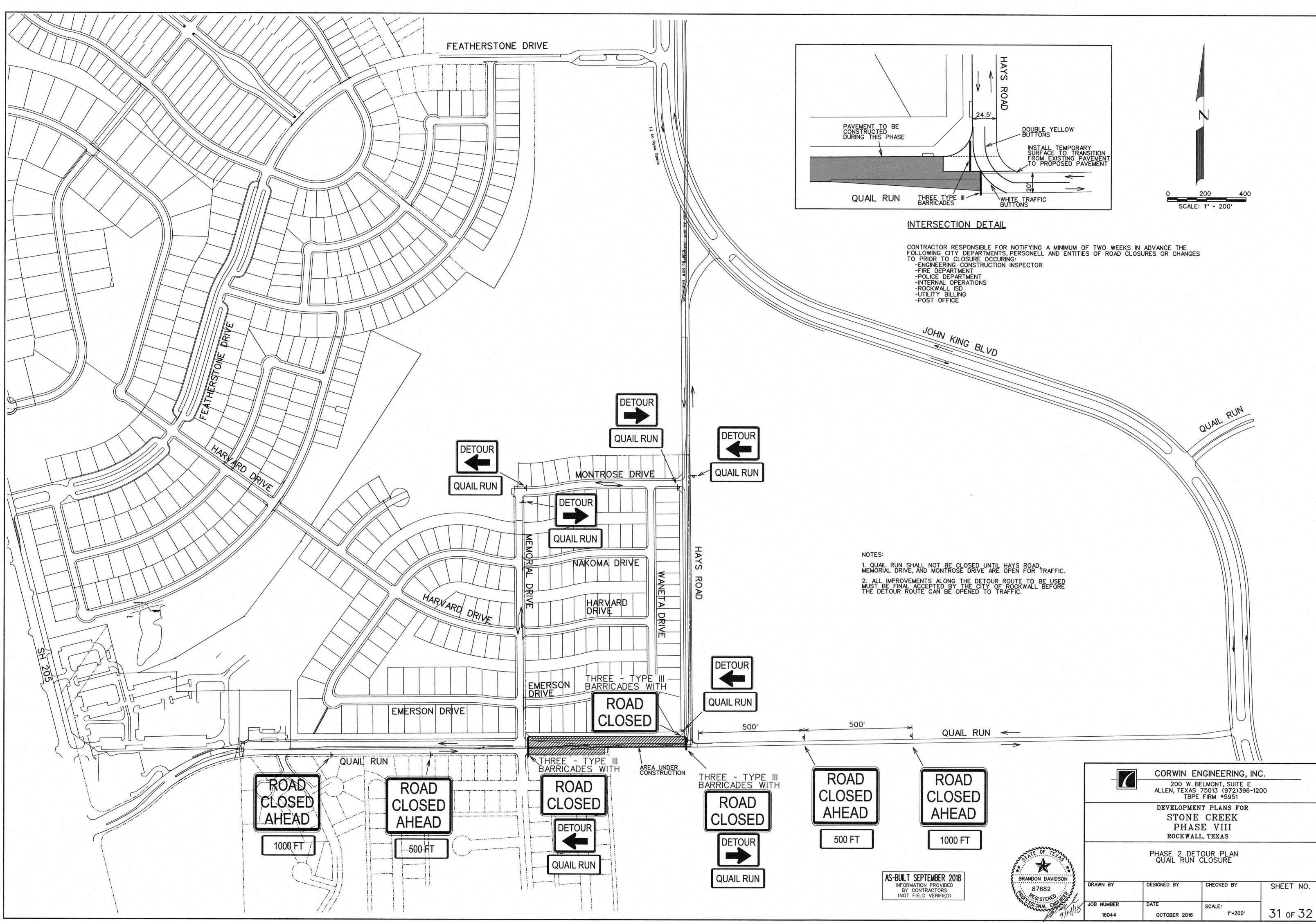






DATE SCALE: 29 of 32 1"=50' 16044 OCTOBER 2016





SHEET NO.

