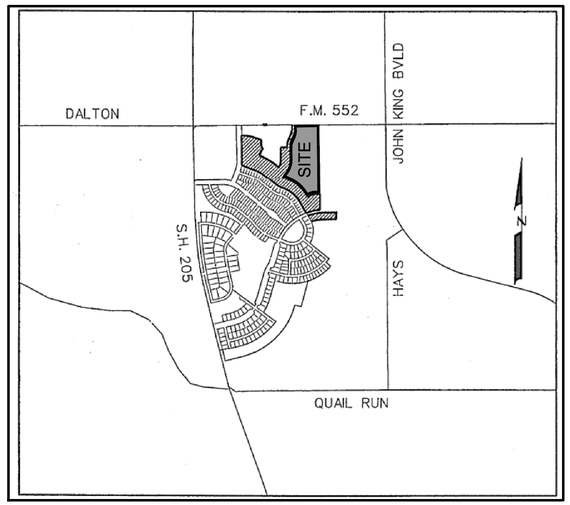
CONSTRUCTION PLANS FOR

STONE CREEK ELEMENTARY SCHOOL

2911 GREENWAY DRIVE
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS 75087

GENERAL NOTE:
CONTRACTOR TO UTILIZE CITY APPROVED CONSTRUCTION PLANS FOR CONSTRUCTION OF ALL CIVIL RELATED FACILITIES. CONTRACTOR TO NOTIFY ARCHITECT/ENGINEER IMMEDIATELY OF ANY COST DISCREPANCIES BETWEEN THE CITY APPROVED SET AND BID SET WITH LATEST ADDENDUMS.



VICINITY MAP
N.T.S.

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RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN: Chrealyn Arney
DATE: 06/01/2020
Glenn Engineering Corporation

OWNER

ROCKWALL I.S.D.
1050 WILLIAMS STREET
ROCKWALL, TEXAS 75087
972-771-0605

ARCHITECT

STANTEC
5717 LEGACY DRIVE, SUITE 250
PLANO, TEXAS 75024
(214) 473-2400

ENGINEER

GLENN ENGINEERING
4500 FULLER DR, SUITE 220
IRVING, TEXAS 75038
(972) 717-5151

MARCH 2019

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Stantec
Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
Tel: (214) 473-2400 / Fax: (214) 473-2401
www.stantec.com

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Consultants

GLENN ENGINEERING
T.B.P.E. FIRM REGISTRATION NO. F - 303
PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02

Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal
STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER
The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD
Elementary School #15
2911 Greenway Drive
Rockwall, TX 75087

Title
COVER SHEET

Project No.	Scale
214000654	AS SHOWN

Revision 8
Drawing No. C 01.00

Plotted: Jun 11, 2020, 10:19 AM by user: john - Saved: 6/2/2020 by user: robert
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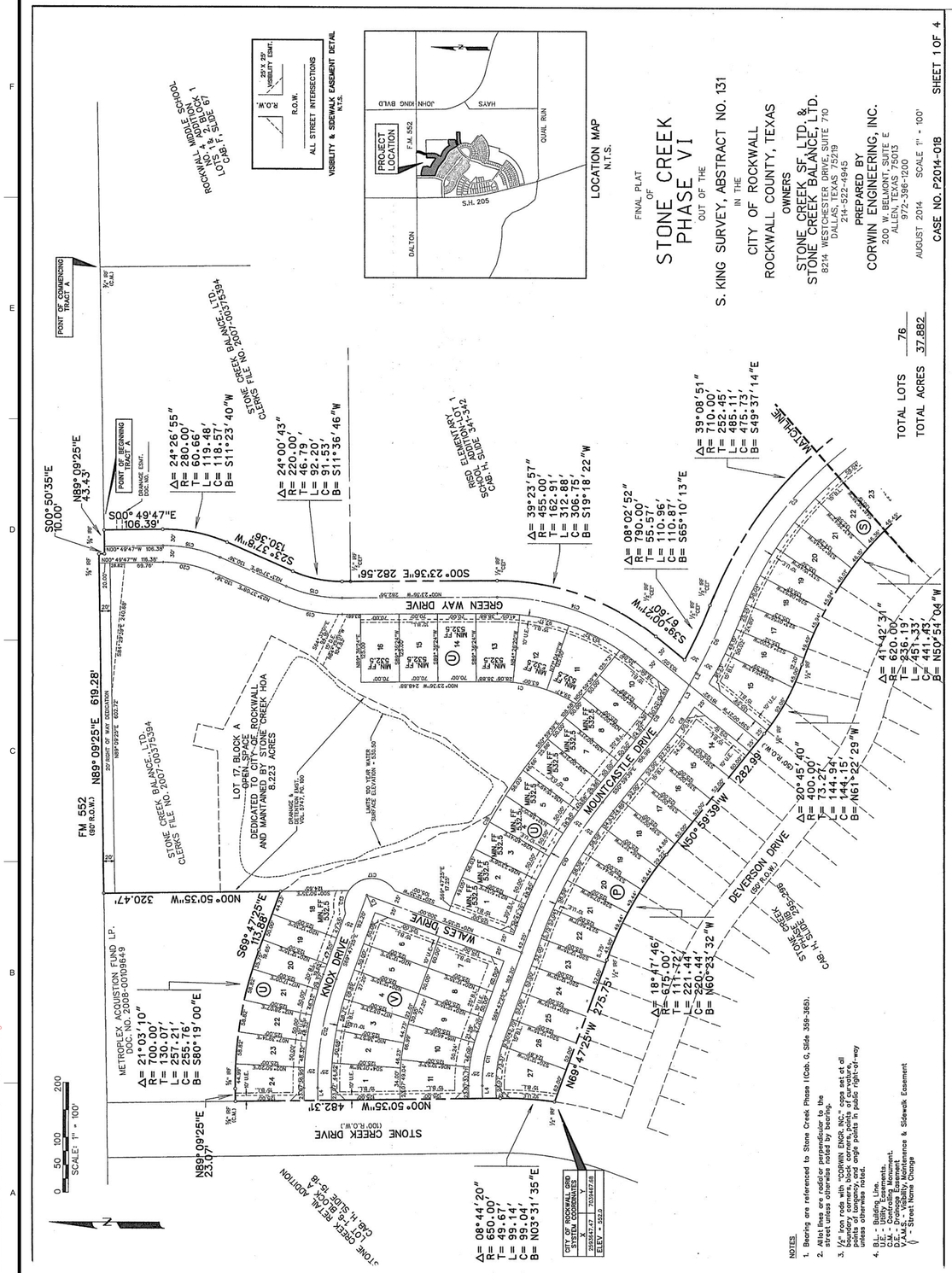

FOR INFORMATION ONLY

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

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Stantec
Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
Tel: * (214) 473-2400 / Fax: (214) 473-2401
www.stantec.com

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PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Issued

Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
REGISTERED
PROFESSIONAL
ENGINEER
The seal appearing on this document was authorized by Mike Glenn, P.E., 35059, on May 13, 2020

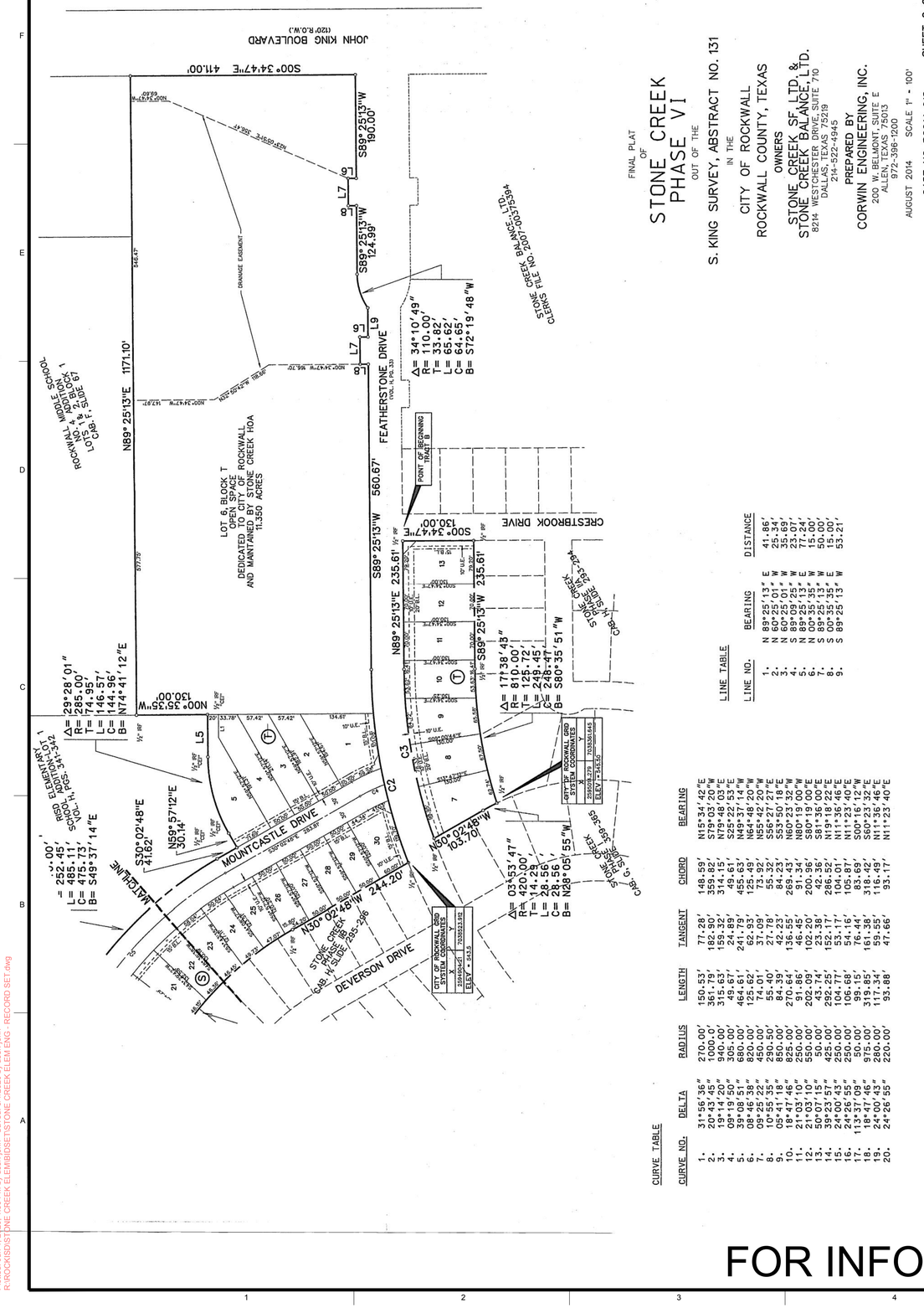
Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
FINAL PLAT

Project No.	Scale
214000654	AS SHOWN
Revision	Drawing No.
8	C01.01



FINAL PLAT
OF
STONE CREEK PHASE VI
OUT OF THE
S. KING SURVEY, ABSTRACT NO. 131
IN THE
CITY OF ROCKWALL
ROCKWALL COUNTY, TEXAS
OWNERS
STONE CREEK SF, LTD. &
STONE CREEK BALANCE, LTD.
8214 WESTCHESTER DRIVE, SUITE 710
DALLAS, TEXAS 75219
214-522-4945
PREPARED BY
CORWIN ENGINEERING, INC.
200 W. BELMONT, SUITE E
ALLEN, TEXAS 75013
972-396-1200
AUGUST 2014 SCALE 1" = 100'
CASE NO. P2014-018 SHEET 2 OF 4

CURVE TABLE					
CURVE NO.	DELTA	RADIUS	LENGTH	TANGENT	CHORD	BEARING
1.	31°56'36"	270.00'	150.53'	77.28'	148.59'	N15°34'42"E
2.	20°43'45"	1000.0'	361.79'	182.90'	359.82'	S79°03'20"W
3.	19°14'20"	940.00'	315.63'	159.32'	314.15'	N79°48'03"E
4.	09°08'51"	820.00'	130.89'	65.57'	130.75'	N64°48'20"W
5.	39°08'51"	680.00'	464.61'	241.79'	455.63'	N49°37'14"W
6.	08°46'38"	820.00'	125.62'	62.93'	125.49'	N64°48'20"W
7.	09°25'22"	450.00'	74.01'	37.09'	73.92'	N55°42'20"W
8.	10°55'35"	290.50'	55.40'	27.78'	55.32'	S58°27'27"E
9.	05°41'18"	850.00'	84.39'	42.23'	84.23'	S53°50'18"E
10.	21°03'10"	250.00'	183.87'	93.03'	179.55'	S69°57'13"E
11.	21°03'10"	250.00'	91.86'	46.45'	91.34'	N80°19'00"W
12.	21°03'10"	550.00'	202.09'	102.20'	200.96'	S80°19'00"E
13.	50°07'15"	50.00'	43.74'	23.38'	42.36'	S81°36'00"E
14.	39°23'57"	425.00'	292.25'	152.17'	286.52'	N19°18'22"E
15.	24°00'43"	250.00'	104.77'	53.17'	104.01'	N11°36'46"E
16.	24°00'43"	250.00'	104.77'	53.17'	104.01'	N11°36'46"E
17.	113°37'09"	50.00'	99.15'	76.44'	83.69'	S00°16'12"W
18.	18°47'46"	975.00'	319.85'	161.38'	318.42'	S60°23'32"E
19.	24°00'43"	280.00'	117.34'	59.55'	116.49'	N11°36'46"E
20.	24°26'55"	220.00'	93.88'	47.66'	93.17'	N11°23'40"E

LINE TABLE		
LINE NO.	BEARING	DISTANCE
1.	N 89°25'13"E	41.86'
2.	N 60°25'01"W	25.34'
3.	N 60°25'01"W	35.69'
4.	S 89°09'25"W	23.07'
5.	N 89°25'13"E	17.24'
6.	S 00°35'35"W	15.00'
7.	S 89°25'13"W	50.00'
8.	S 00°35'35"E	15.00'
9.	S 89°25'13"W	53.21'

LEGAL DESCRIPTION

WHEREAS, STONE CREEK SF, LTD.& STONE CREEK BALANCE, LTD., are the owners of a tract of land situated in the W.T. DeWeese Survey, Abstract No. 71,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 and Stone Creek SF, LTD., Clerks File No. 2007-00375388 in said Deed Records, and being more particularly described as follows:

COMMENCING, at a ½" inch iron rod found at the northeast corner of Rockwall Middle School No. 4 Addition, an addition to the City of Rockwall, as described in Cabinet F, Page 87, in the Plat Records of Rockwall County, Texas, being in the south line of F.M. 552 (Variable R.O.W.);

THENCE, South 89°09'25" West, along the south line of said F.M. 552 and being in the north line of said Stone Creek Balance tract, for a distance of 41.86 feet to the POINT OF BEGINNING;

THENCE, departing said south line, South 00°50'35" East, at a distance of 130.36 feet, to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.", at the point of curvature of a curve to the right, having a radius of 280.00 feet, a central angle of 24°26'55", and a tangent of 60.66 feet;

THENCE, along said curve to the right for an arc distance of 119.48 feet (Chord Bearing South 11°23'40" West - 118.57 feet), to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.", being at the point of tangency of said curve;

THENCE, South 23°37'08" West, for a distance of 130.36 feet, to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.", at the point of curvature of a curve to the left, having a radius of 220.00 feet, a central angle of 24°26'55", and a tangent of 48.79 feet;

THENCE, along said curve to the left for an arc distance of 92.20 feet (Chord Bearing South 11°36'46" West - 91.53 feet), to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.", at the point of tangency of said curve;

THENCE, South 00°23'30" East, at 15.60 feet, passing a ½" inch iron rod found at the northwest corner of RISD Elementary School Addition-Lot 1, an addition to the City of Rockwall, as described in Vol. N, Pg. 341-342, in said Plat Records, for a total distance of 103.70 feet, to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.", at the point of curvature of a curve to the right, having a radius of 455.00 feet, a central angle of 39°23'57", and a tangent of 162.91 feet;

THENCE, along the west line of said RISD Elementary School Addition-Lot 1 and with said curve to the right, for a distance of 312.88 feet (Chord Bearing South 19°18'22" West - 306.75 feet), to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the northwest corner of said RISD Elementary School Addition-Lot 1, being on a curve to the left, having a radius of 790.00 feet, a central angle of 08°02'52", and a tangent of 55.57 feet;

THENCE, along the south line of said RISD Elementary School Addition-Lot 1 and with said curve to the left for an arc distance of 110.96 feet, (Chord Bearing South 49°37'14" East - 475.73 feet), to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of tangency of said curve;

THENCE, along the south line of said RISD Elementary School Addition-Lot 1 and the east line of said RISD Elementary School Addition-Lot 1, the following courses and distances:

THENCE, South 30°02'48" East, continuing along said south line, for a distance of 41.62 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, North 59°57'12" East, continuing along said south line, for a distance of 30.14 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of curvature of a curve to the right, having a radius of 270.00 feet, a central angle of 31°56'36", and a tangent of 77.28 feet;

THENCE, along said curve to the right for an arc distance of 150.53 feet, (Chord Bearing North 74°41'12" East - 148.59 feet), to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of tangency of said curve;

THENCE, South 89°25'13" East, continuing along said south line, for a distance of 560.67 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, South 00°35'35" West, continuing along said south line, for a distance of 15.00 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, South 89°25'13" East, continuing along said south line, for a distance of 235.61 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, North 00°35'35" East, continuing along said south line, for a distance of 15.00 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, South 89°25'13" East, continuing along said south line, for a distance of 64.65 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, South 00°34'47" East, departing said south line and along the west line of said John King Boulevard, for a distance of 411.00 feet, to a ½" inch rod set at the northeast corner of Featherstone Drive, an addition to the City of Rockwall, as described in Vol. H, Pg. 33, in said Plat Records;

THENCE, South 89°25'13" West, along the north line of said Featherstone Drive, for a distance of 190.00 feet, to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, North 00°35'35" West, continuing along said north line, for a distance of 15.00 feet, to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, South 89°25'13" West, continuing along said north line, for a distance of 50.00 feet, to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, South 00°35'35" East, continuing along said north line, for a distance of 15.00 feet, to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, South 89°25'13" West, continuing along said north line, for a distance of 124.99 feet, to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.", at the point of curvature of a curve to the left, having a radius of 110.00 feet, a central angle of 34°10'49", and a tangent of 33.82 feet;

THENCE, continuing along said north line and with said curve to the left for an arc distance of 65.62 feet (Chord Bearing South 72°19'48" West - 64.65 feet), to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of tangency of said curve;

THENCE, South 89°25'13" West, continuing along said north line, for a distance of 124.99 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, South 89°25'13" West, continuing along said north line, for a distance of 190.00 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, North 00°59'39" West, continuing along said north line, for a distance of 282.89 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of curvature of a curve to the left, having a radius of 1171.10 feet, a central angle of 10°47'49", and a tangent of 110.82 feet;

THENCE, along said curve to the left for an arc distance of 220.44 feet (Chord Bearing North 60°34'23" West - 220.14 feet), to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of tangency of said curve;

THENCE, North 65°27'25" West, continuing along said north line, for a distance of 275.75 feet, to a ½" inch iron rod found with a yellow cap at the northwest corner of said Stone Creek Phase IB, being in the east line of Stone Creek Drive (100' R.O.W.), same being on a curve to the left, having a radius of 650.00 feet, a central angle of 08°44'20", and a tangent of 49.57 feet;

THENCE, North 03°31'35" East - 99.04 feet, to a ½" inch iron rod found with a yellow cap at the southwest corner of a 2.2881 acre tract, as described in Doc. No.20060804000268549, in said Deed Records;

THENCE, North 89°09'25" East, departing said east line, for a distance of 492.31 feet, to a ⅝" inch iron rod found stamped "Pogue Sur" at the southeast corner of said 2.2881 acre tract;

THENCE, North 89°09'25" East, continuing along said south line, for a distance of 23.07 feet to a ⅝" inch iron rod found stamped "Pogue Sur" being on a curve to the right having a radius of 700.00 feet, a central angle of 21°00'50", and a tangent of 130.07 feet;

THENCE, along said curve to the right for an arc distance of 257.21 feet (Chord Bearing South 80°19'00" East - 255.76 feet), to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.", at the point of tangency of said curve;

THENCE, South 69°47'25" East, continuing along said south line, for a distance of 113.88 feet, to a ½" inch iron rod set stamped "Corwin Eng. Inc.", being the southeast corner of said 2.2881 acre tract;

THENCE, North 00°50'35" West, along the east line of said 2.2881 acre tract, for a distance of 320.47 feet, to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.", in the south line of said Stone Creek Phase IA;

THENCE, North 89°09'25" East, along the south line of said Stone Creek Phase IA, for a distance of 619.28 feet, to a ⅝" inch iron rod found;

THENCE, South 00°50'35" East, continuing along said south line, for a distance of 10.00 feet, to a ⅝" inch iron rod found;

THENCE, North 89°09'25" East, continuing along said south line, for a distance of 43.43 feet, to the POINT OF BEGINNING and containing 36.337 acres of land.

LEGAL DESCRIPTION - TRACT B

WHEREAS, STONE CREEK SF, LTD.& STONE CREEK BALANCE, LTD., are the owners of a tract of land situated in the W.T. DeWeese Survey, Abstract No. 71,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. 2007-00375388 and Stone Creek SF, LTD., Clerks File No. 2007-00375394 in said Deed Records, and being more particularly described as follows:

BEGINNING, at a ½" inch iron rod found at the most northerly northwest corner of Stone Creek Phase IIA, an addition to the City of Rockwall, as described in Cab. H, Pg. 293, in the Plat Records of Rockwall County, Texas, same being in the south line of Featherstone Drive (Variable R.O.W.);

THENCE, South 89°25'13" East, along said south line and the south line of said Stone Creek Phase IIA, a distance of 560.67 feet, to a ½" inch iron rod found at the northwest corner of Stone Creek Phase IB, an addition to the City of Rockwall, as described in Vol. N, Pg. 341-342, in said Plat Records, for a total distance of 1171.10 feet, to a ½" inch iron rod found at the point of curvature of a curve to the left, having a radius of 546.47 feet, a central angle of 29°28'01", and a tangent of 146.57 feet;

THENCE, along said curve to the left and the west line of said Stone Creek Phase IB, for an arc distance of 281.00 feet (Chord Bearing South 14°41'12" West - 277.79 feet), to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of tangency of said curve;

THENCE, South 00°25'01" West, continuing along said west line, for a distance of 252.45 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, South 89°25'13" West, departing said west line, for a distance of 235.61 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, South 00°25'01" West, continuing along said south line, for a distance of 130.00 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, South 89°25'13" West, continuing along said south line, for a distance of 560.67 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of curvature of a curve to the left, having a radius of 475.73 feet, a central angle of 39°23'57", and a tangent of 168.91 feet;

THENCE, along said curve to the left and the east line of said RISD Elementary School Addition-Lot 1, for an arc distance of 327.09 feet (Chord Bearing South 19°18'22" East - 320.64 feet), to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of tangency of said curve;

THENCE, South 00°23'30" East, continuing along said east line, for a distance of 103.70 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of curvature of a curve to the right, having a radius of 285.00 feet, a central angle of 29°28'01", and a tangent of 74.95 feet;

THENCE, along said curve to the right and the west line of said RISD Elementary School Addition-Lot 1, for an arc distance of 146.57 feet (Chord Bearing South 14°41'12" West - 144.96 feet), to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc." at the point of tangency;

THENCE, South 30°02'48" West, along the west line of said RISD Elementary School Addition-Lot 1, for a distance of 130.00 feet, to a ½" inch iron rod found at the southwest corner of said RISD Elementary School Addition-Lot 1, same being in the north line of John King Boulevard (120' R.O.W.);

THENCE, North 59°57'12" West, departing said west line and along the south line of said RockwallMiddle School No. 4 Addition, for a distance of 30.14 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, South 30°02'48" West, continuing along said south line, for a distance of 41.62 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.";

THENCE, North 59°57'12" West, continuing along said south line, for a distance of 546.47 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of curvature of a curve to the right, having a radius of 977.75 feet, a central angle of 16°00'00", and a tangent of 139.71 feet;

THENCE, along said curve to the right and the east line of said Stone Creek Phase IIA, for an arc distance of 273.07 feet (Chord Bearing North 67°57'12" West - 272.17 feet), to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of tangency of said curve;

THENCE, North 59°57'12" East, continuing along said east line, for a distance of 30.14 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of curvature of a curve to the right, having a radius of 546.47 feet, a central angle of 41°42'31", and a tangent of 208.96 feet;

THENCE, along said curve to the right and the east line of said Stone Creek Phase IIA, for an arc distance of 397.76 feet (Chord Bearing North 80°48'27" East - 389.04 feet), to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of tangency of said curve;

THENCE, South 78°20'18" East, continuing along said east line, for a distance of 103.70 feet, to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of curvature of a curve to the right, having a radius of 420.00 feet, a central angle of 03°53'47", and a tangent of 14.29 feet;

THENCE, along the east line of said Stone Creek Phase IIA and with said curve to the left for an arc distance of 28.56 feet (Chord Bearing South 76°23'25" East - 28.56 feet), to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.", at the point of tangency;

THENCE, North 30°02'48" West, continuing along said east line, for a distance of 103.70 feet, to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.", at the point of curvature of a curve to the right, having a radius of 940.00 feet, a central angle of 18°47'46", and a tangent of 155.57 feet;

THENCE, along said curve to the right and the east line of said Stone Creek Phase IIA, for an arc distance of 308.36 feet (Chord Bearing North 20°38'41" West - 307.04 feet), to a ½" inch iron rod found with a yellow cap stamped "Corwin Eng. Inc.", at the point of tangency of said curve;

THENCE, North 11°15'18" West, continuing along said east line, for a distance of 303.70 feet, to a ½" inch iron rod set with a yellow cap stamped "Corwin Eng. Inc.", at the point of curvature of a curve to the right, having a radius of 940.00 feet, a central angle of 19°14'20", and a tangent of 159.32 feet;

THENCE, departing the east line of said Stone Creek Phase IIA and along the south line of said Featherstone Drive for an arc distance of 315.63 feet (Chord Bearing North 79°48'03" East - 314.15 feet), to a ½" inch iron rod set with a yellow cap stamped Corwin Eng. Inc. at the point of tangency;

THENCE, North 89°25'13" East, continuing along said south line, for a distance of 235.61 feet, to the POINT OF BEGINNING and containing 5.045 acres of land.

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN: Charalyn Arroyo
DATE: 06/01/2020
Glenn Engineering Corporation

FINAL PLAT
OF
STONE CREEK PHASE VI
OUT OF THE
S. KING SURVEY, ABSTRACT NO. 131
IN THE
CITY OF ROCKWALL
ROCKWALL COUNTY, TEXAS
OWNERS
STONE CREEK SF, LTD. &
STONE CREEK BALANCE, LTD.
8214 WESTCHESTER DRIVE, SUITE 710
DALLAS, TEXAS 75219
214-522-4945
PREPARED BY
CORWIN ENGINEERING, INC.
200 W. BELMONT, SUITE E
ALLEN, TEXAS 75013
972-396-1200
AUGUST 2014
CASE NO. P2014-018 SHEET 3 OF 4

Stantec
Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
Tel: (214) 473-2400 / Fax: (214) 473-2401
www.stantec.com

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Consultants

GLENN ENGINEERING
T.B.P.E. FIRM REGISTRATION NO. F - 303
PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
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2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01
Issued	By	Appd	YYYY.MM.DD

Permit-Seal

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
FINAL PLAT

Project No.	Scale
214000654	AS SHOWN
Revision	Drawing No.
8	C01.02

FOR INFORMATION ONLY

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Plotted: Jun 1, 2020, 1:36 PM by user: john - Saved: 6/1/2020 by user: john
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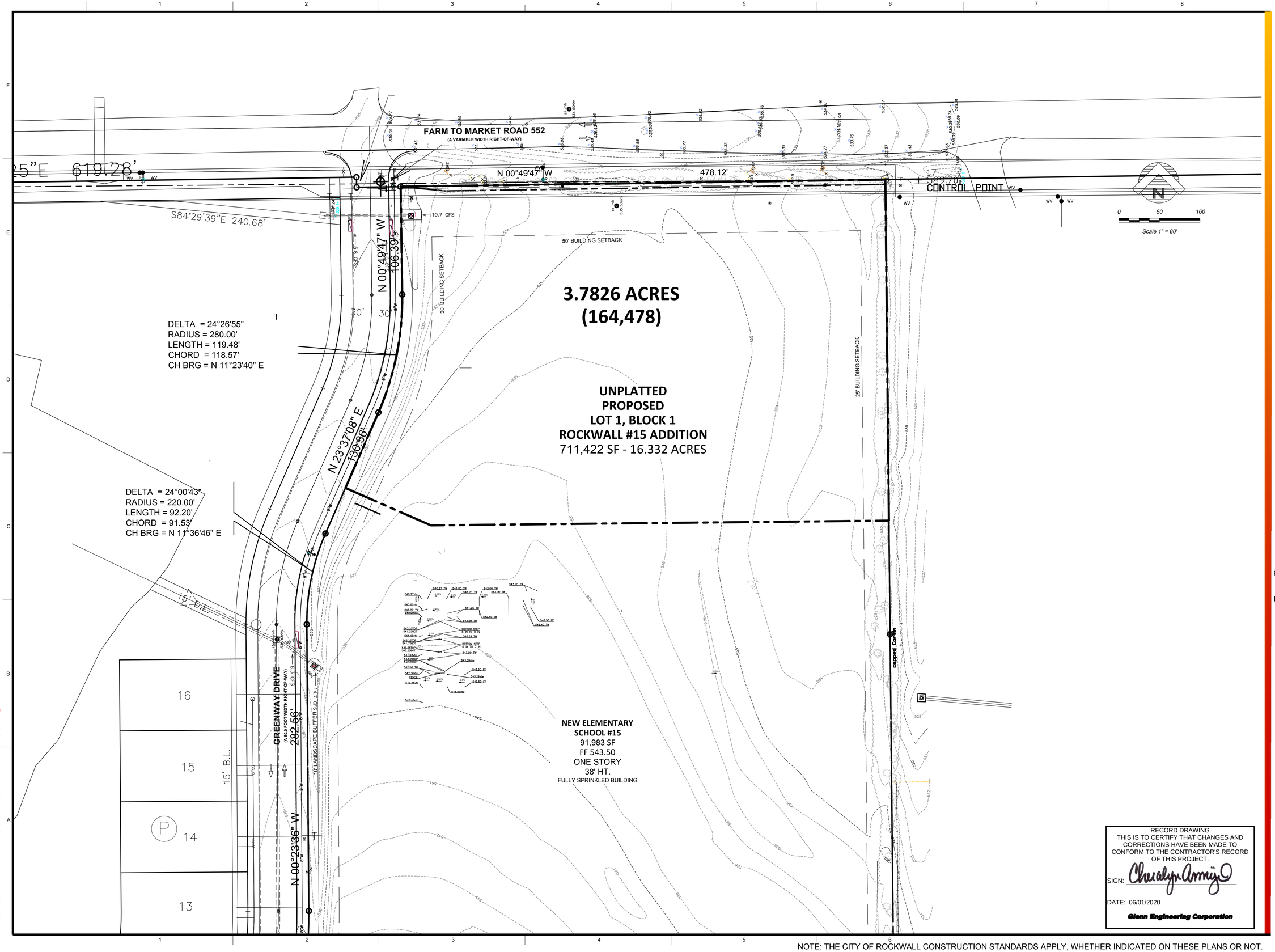
...\dgn\1306ab1at.dgn 9/15/2014 9:46:27 AM



RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.

SIGN: Chrislyn Arroyo

DATE: 06/01/2020

Glenn Engineering Corporation

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

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4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

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Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

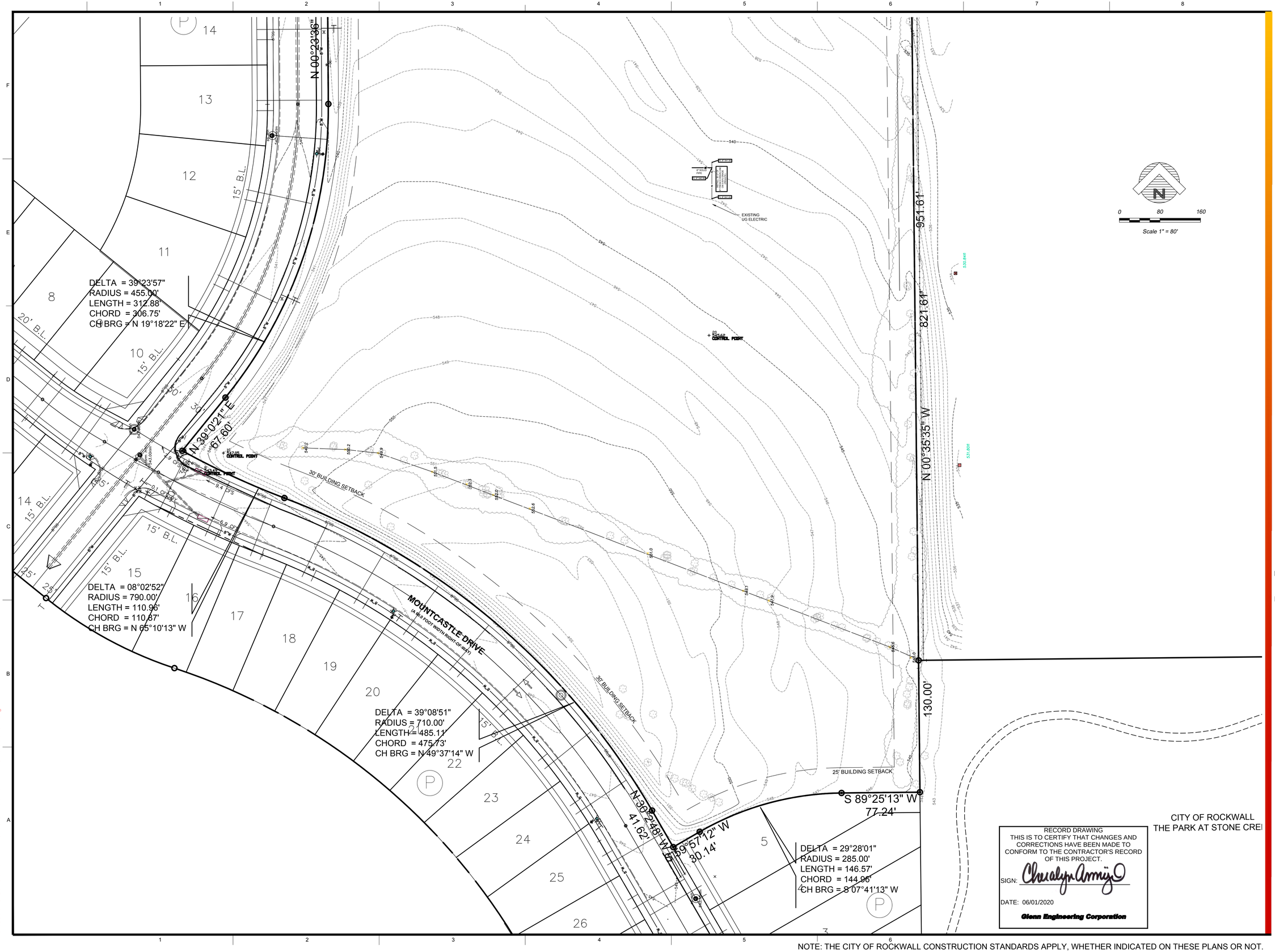
Title
TOPOGRAPHIC SURVEY

Project No. 214000654

Scale AS SHOWN

Revision 8

Drawing No. C01.05



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SIGN:
DATE: 06/01/2020
Glenn Engineering Corporation

CITY OF ROCKWALL
THE PARK AT STONE CREE

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

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Issued	By	Appd	
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

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Client/Project
Rockwall ISD

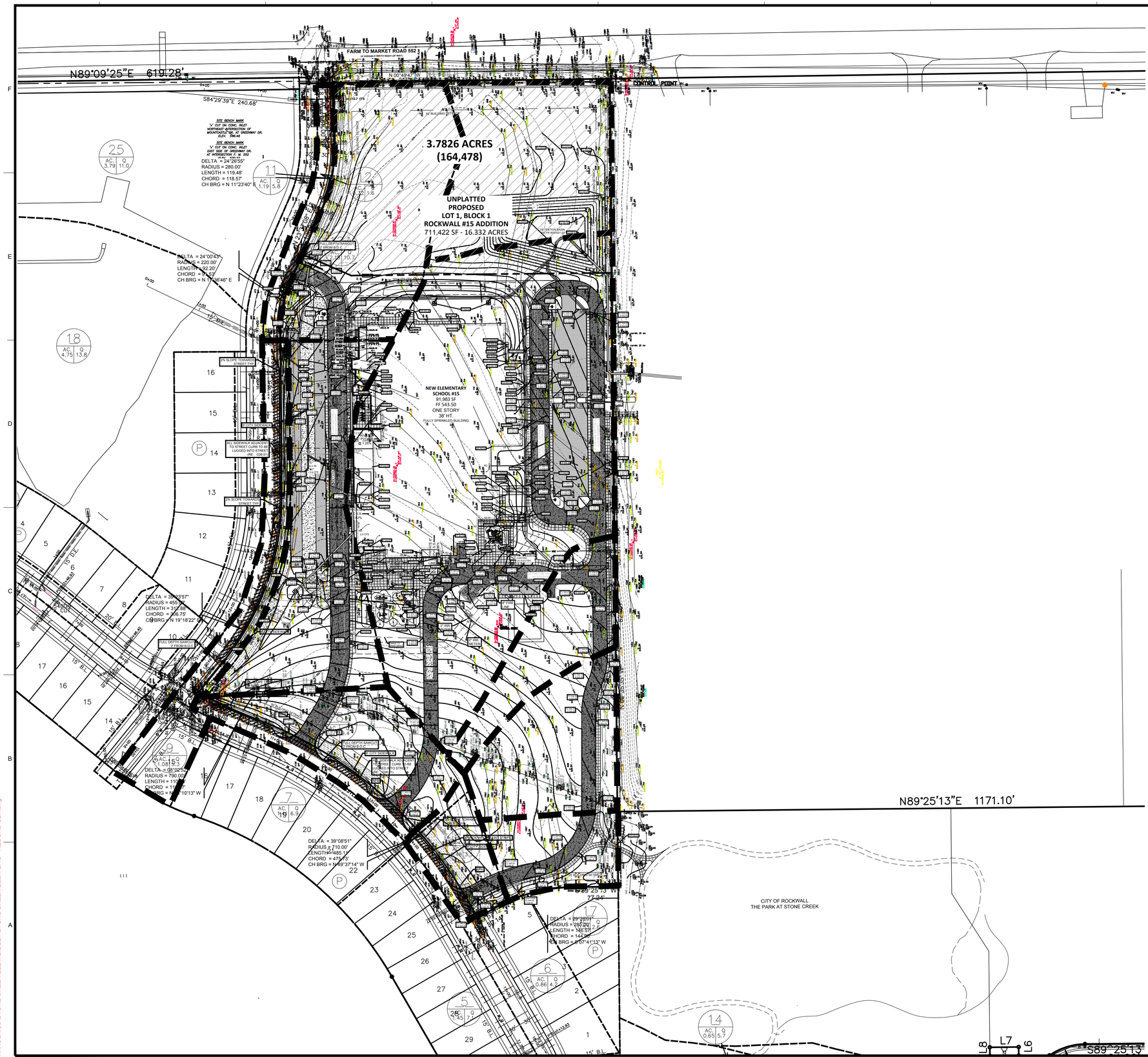
Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
TOPOGRAPHIC SURVEY

Project No.	Scale
214000654	AS SHOWN

Revision 8 | Drawing No. C01.06


FARM TO MARKET ROAD 552
(A VARIABLE WIDTH RIGHT-OF-WAY)
N89°09'25"E 619.28'
S84°29'39"E 240.68'
N00°49'41"E 478.12'
EXISTING CONTROL POINT
3.7826 ACRES
(164,478)
UNPLATTED
PROPOSED
LOT 1, BLOCK 1
ROCKWALL #15 ADDITION
711,422 SF - 16.332 ACRES
NEW ELEMENTARY
SCHOOL #15
91,983 SF
FF 543.50
ONE STORY
38' HT.
FULLY SPRINKLED BUILDING
SITE BENCH MARK
"X" CUT ON CONC. INLET
NORTHEAST INTERSECTION OF
MOUNTAINTOP DR. AT GREENWAY DR.
ELEV. 544.48
SITE BENCH MARK
"X" CUT ON CONC. INLET
EAST SIDE OF GREENWAY DR.
AT INTERSECTION P.I. N. 502
ELEV. 544.48
DELTA = 24°26'55"
RADIUS = 280.00'
LENGTH = 119.48'
CHORD = 118.57'
CH BRG = N 11°23'40" E
DELTA = 24°00'42"
RADIUS = 220.00'
LENGTH = 92.20'
CHORD = 91.53'
CH BRG = N 11°36'46" E
DELTA = 36°03'57"
RADIUS = 450.00'
LENGTH = 312.98'
CHORD = 306.75'
CH BRG = N 19°18'22" W
DELTA = 08°10'25"
RADIUS = 790.00'
LENGTH = 112.70'
CHORD = 112.60'
CH BRG = N 41°10'13" W
DELTA = 39°08'51"
RADIUS = 710.00'
LENGTH = 485.13'
CHORD = 475.63'
CH BRG = N 49°37'14" W
DELTA = 39°28'07"
RADIUS = 695.00'
LENGTH = 478.77'
CHORD = 469.37'
CH BRG = S 69°41'13" W
N89°25'13"E 1171.10'
S89°25'13"
CITY OF ROCKWALL
THE PARK AT STONE CREEK
2% SLOPE TOWARDS STREET (TYP.)
ALL SIDEWALK ADJACENT TO STREET CURB TO BE LOCATED WITH STREET LUGGED RADII (TYP.)
FULL DEPTH SAWCUT 2' FROM BACK OF CURB
EXISTING BUILDING
EXISTING SIDEWALK
EXISTING CONCRETE PAVING
EXISTING TREE
EXISTING POWER POLE
EXISTING FIRE HYDRANT
EXISTING WATER VALVE
EXISTING SANITARY SEWER MANHOLE
EXISTING STORM SEWER MANHOLE
EXISTING STORM SEWER INLET
EXISTING GAS VALVE
EXISTING GAS METER
EXISTING GAS LINE
EXISTING WATER LINE
EXISTING SANITARY SEWER LINE
EXISTING STORM SEWER LINE
EXISTING OVERHEAD UTILITY LINE
EXISTING FENCE
EXISTING CONTOUR
EXISTING SPOT ELEVATION
EXISTING BUILDING
EXISTING CONCRETE PAVING TO BE REMOVED
EXISTING SIDEWALK TO BE REMOVED
EXISTING BUILDING TO BE REMOVED
EXISTING UTILITY LINE TO BE REMOVED
EXISTING FENCE TO BE REMOVED
EXISTING TREE TO BE REMOVED
EXISTING POWER POLE TO BE REMOVED
EXISTING FIRE HYDRANT TO BE REMOVED
EXISTING WATER VALVE TO BE REMOVED
EXISTING SANITARY SEWER MANHOLE TO BE REMOVED
EXISTING STORM SEWER MANHOLE TO BE REMOVED
EXISTING STORM SEWER INLET TO BE REMOVED
EXISTING GAS VALVE TO BE REMOVED
EXISTING GAS METER TO BE REMOVED
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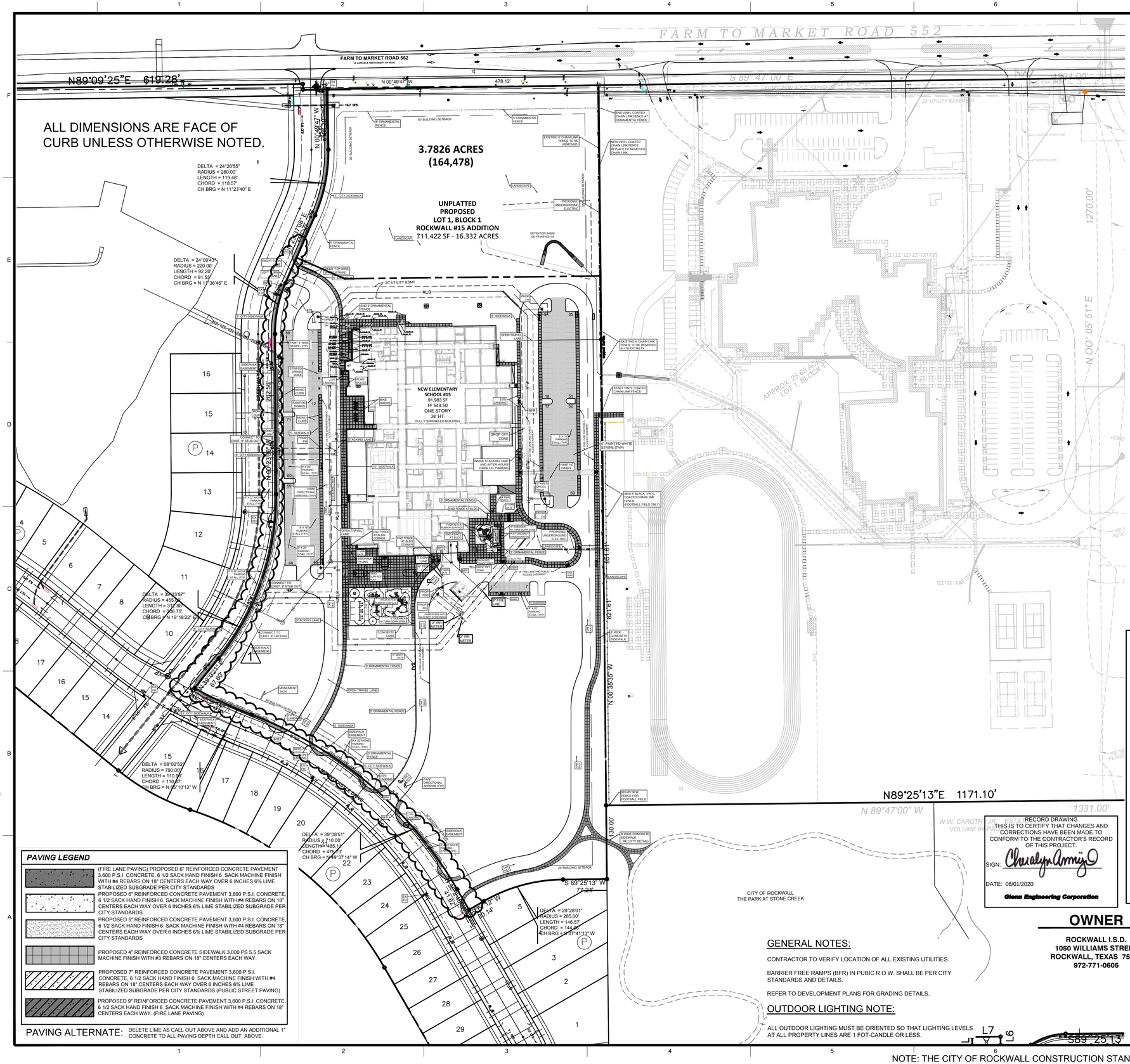
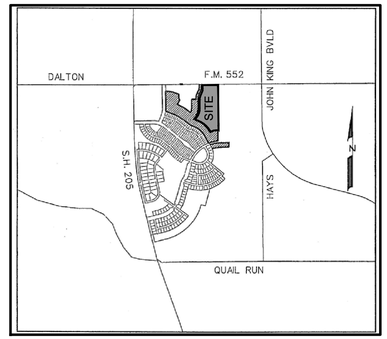
EXISTING CONTOUR TO BE REMOVED
EXISTING SPOT ELEVATION TO BE REMOVED
EXISTING BUILDING TO BE REMOVED



GENERAL SITE NOTES

1. STRIPING & SIGNAGE DIMENSIONS ARE FROM FACE OF CURB.
2. ALL FIRE LANES, PARKING STRIPING, HDCP PARKING STRIPING & SIGNAGE ARE TO BE IN ACCORDANCE WITH CITY OF ROCKWALL REQUIREMENTS, TYP.
3. PRIOR TO ANY CONSTRUCTION THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS, THE PLANS INCLUDING ALL NOTES, THE CITY OF ROCKWALL SPECIFICATIONS AND ANY OTHER APPLICABLE STANDARDS OR SPECIFICATIONS RELEVANT TO THE PROPER COMPLETION OF THE WORK SPECIFIED. FAILURE ON THE PART OF THE CONTRACTOR TO FAMILIARIZE HIMSELF WITH ALL STANDARDS OR SPECIFICATIONS PERTAINING TO THIS WORK SHALL IN NO WAY RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR PERFORMING THE WORK IN ACCORDANCE WITH ALL SUCH APPLICABLE STANDARDS AND SPECIFICATIONS.
4. CONTRACTOR SHALL HAVE IN HIS POSSESSION, PRIOR TO CONSTRUCTION, ALL NECESSARY PERMITS, LICENSES, ETC. CONTRACTOR SHALL HAVE AT LEAST ONE SET OF APPROVED ENGINEERING PLANS AND SPECIFICATIONS ON-SITE AT ALL TIMES.
5. ALL WORK SHALL CONFORM TO THE CITY OF ROCKWALL SPECIFICATIONS, STANDARDS, AND DETAILS.
6. IF UNFORESEEN PROBLEMS OR CONFLICTS ARE ENCOUNTERED IN THE CONSTRUCTION, FOR WHICH AN IMMEDIATE SOLUTION IS NOT APPARENT, THE ENGINEER, OWNER, AND CITY SHALL BE NOTIFIED IMMEDIATELY.
7. IT WILL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO PROTECT ALL EXISTING PUBLIC AND PRIVATE UTILITIES THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES FOR LINE LOCATIONS, PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL ASSUME FULL LIABILITY TO THOSE COMPANIES FOR ANY DAMAGES CAUSED TO THEIR FACILITIES.
8. CONTRACTORS SHALL BE RESPONSIBLE FOR FIELD LOCATING EXISTING UTILITIES AND IMPROVEMENTS PRIOR TO CONSTRUCTION.
9. TRENCH SAFETY DESIGN WILL BE THE RESPONSIBILITY OF THE UTILITY CONTRACTOR. CONTRACTOR SHALL SUBMIT DESIGN TO THE CITY OF ROCKWALL ENGINEERING DEPARTMENT FOR REVIEW.
10. MARK FIRE LANES TO THE CITY OF ROCKWALL SPECIFICATION. "NO PARKING FIRE LANE" EVERY 25' WHITE 4" LETTERS ON A 6" RED STRIPED BACKGROUND.
11. NO TREES ARE TO BE PLANTED WITHIN 5' OF ANY UTILITIES.
12. ADHERENCE TO ENGINEERING AND FIRE DEPARTMENT STANDARDS SHALL BE REQUIRED.
13. DUMPSTER ENCLOSURE SHALL HAVE SELF LATCHING MECHANISM AND GATE SHALL BE OPAQUE. ENCLOSURE SHALL BE 6' IN HEIGHT WITH THE EXTERIOR MATERIALS MATCHING PRIMARY STRUCTURE.



VICINITY MAP
N.T.S.

SITE DATA SUMMARY TABLE

EXISTING ZONING	SF-10
PROPOSED ZONING	SF-10
USE	PUBLIC ELEMENTARY SCHOOL
LOT AREA	711,422 SQ. FT. OR 16.332 ACRES
ADDRESS	2911 GREENWAY DRIVE
BUILDING AREA (FLOOR AREA) TOTAL BUILDING AREA	91,983 SF
LOT COVERAGE	91,983 SF / 753,249 SF = 12.21%
FLOOR AREA RATIO	0.12 : 1
TOTAL NEW IMPERVIOUS COVERAGE	191,432 SF OR 4.395 ACRES
CLASSROOM BUILDING HEIGHT - AREA A	27'-0" (1 STORY) "MEASURED TO PARAPET"

PARKING REQUIREMENTS

HOME ROOM - CLASSROOMS		39 CLASSROOMS		
2.5 PER HOMEROOM CLASSROOM		97 PARKING SPACES REQUIRED		
STUDENTS (K-6TH)		900 STUDENTS		
PARKING REQUIRED 1/25 STUDENTS 900/25		36 PARKING SPACES REQUIRED		
PARKING PROVIDED				
PARKING ELEMENTARY SCHOOL	FRONT	(9.0' X 20.0')	44	SPACES
		(9.0' X 18.0')	41	SPACES
		HC SPACES	4	SPACES
	REAR	(9.0' X 18.0')	63	SPACES
		HC SPACES	2	SPACES
	KITCHEN	(9.0' X 20.0')	6	SPACES
		HC SPACES	2	SPACES
TOTAL PARKING PROVIDED			161	SPACES

PAVING LEGEND

- (FIRE LANE PAVING) PROPOSED 6" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS
- PROPOSED 6" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS
- PROPOSED 5" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS
- PROPOSED 4" REINFORCED CONCRETE SIDEWALK 3,000 PS 5.5 SACK MACHINE FINISH WITH #3 REBARS ON 18" CENTERS EACH WAY.
- PROPOSED 7" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS (PUBLIC STREET PAVING)
- PROPOSED 9" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY. (FIRE LANE PAVING)

PAVING ALTERNATE: DELETE LIME AS CALL OUT ABOVE AND ADD AN ADDITIONAL 1" CONCRETE TO ALL PAVING DEPTH CALL OUT ABOVE.

GENERAL NOTES:

CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES.

BARRIER FREE RAMPS (BFR) IN PUBIC R.O.W. SHALL BE PER CITY STANDARDS AND DETAILS.

REFER TO DEVELOPMENT PLANS FOR GRADING DETAILS.

OUTDOOR LIGHTING NOTE:

ALL OUTDOOR LIGHTING MUST BE ORIENTED SO THAT LIGHTING LEVELS AT ALL PROPERTY LINES ARE 1 FOT-CANDLE OR LESS.

OWNER	ARCHITECT	ENGINEER
ROCKWALL I.S.D.	STANTEC	GLENN ENGINEERING
1050 WILLIAMS STREET	5717 LEGACY DRIVE, SUITE 250	105 DECKER COURT, SUITE 910
ROCKWALL, TEXAS 75087	PLANO, TEXAS 75024	IRVING, TEXAS 75062
972-771-0605	(214) 473-2400	(972) 717-5151

Date: October 12, 2018
Case Number: SP2018-032

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

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4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

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Issued

Permit-Seal

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Client/Project
Rockwall ISD

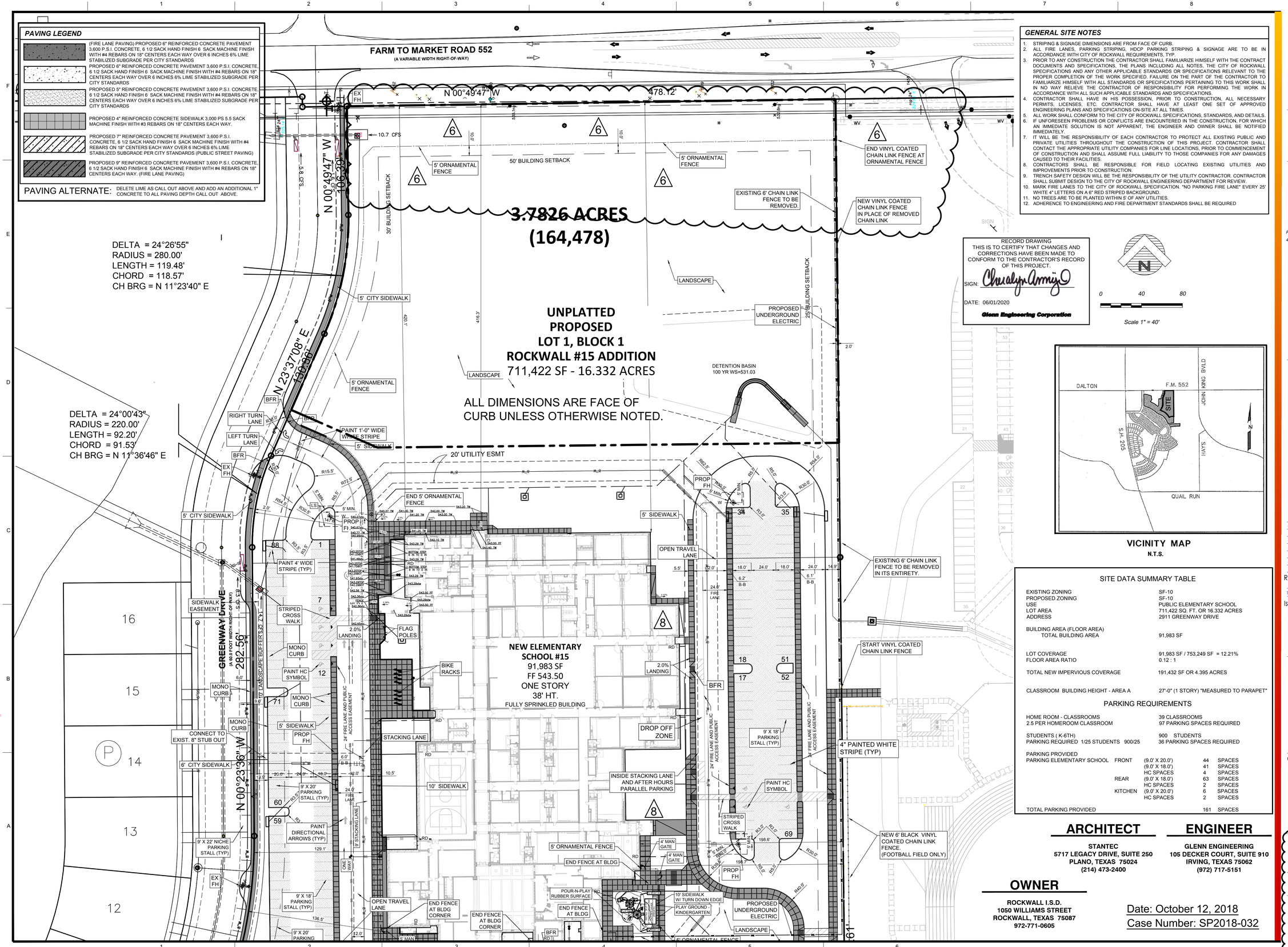
Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
SITE PLAN

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 03.00

Plotted: Jun 1, 2020, 1:41 PM by user: john - Saved: 6/1/2020 by user: john
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK ELEM ENG - RECORD SET.dwg



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5. ALL WORK SHALL CONFORM TO THE CITY OF ROCKWALL SPECIFICATIONS, STANDARDS, AND DETAILS.
6. IF UNFORESEEN PROBLEMS OR CONFLICTS ARE ENCOUNTERED IN THE CONSTRUCTION, FOR WHICH AN IMMEDIATE SOLUTION IS NOT APPARENT, THE ENGINEER AND OWNER SHALL BE NOTIFIED IMMEDIATELY.
7. IT WILL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO PROTECT ALL EXISTING PUBLIC AND PRIVATE UTILITIES THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES FOR LINE LOCATIONS, PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL ASSUME FULL LIABILITY TO THOSE COMPANIES FOR ANY DAMAGES CAUSED TO THEIR FACILITIES.
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10. MARK FIRE LANES TO THE CITY OF ROCKWALL SPECIFICATION. "NO PARKING FIRE LANE" EVERY 25' WHITE 4" LETTERS ON A 6" RED STRIPED BACKGROUND.
11. NO TREES ARE TO BE PLANTED WITHIN 5' OF ANY UTILITIES.
12. ADHERENCE TO ENGINEERING AND FIRE DEPARTMENT STANDARDS SHALL BE REQUIRED

SITE DATA SUMMARY TABLE

EXISTING ZONING	SF-10
PROPOSED ZONING	SF-10
USE	PUBLIC ELEMENTARY SCHOOL
LOT AREA	711,422 SQ. FT. OR 16.332 ACRES
ADDRESS	2911 GREENWAY DRIVE
BUILDING AREA (FLOOR AREA) TOTAL BUILDING AREA	91,983 SF
LOT COVERAGE	91,983 SF / 753,249 SF = 12.21%
FLOOR AREA RATIO	0.12 : 1
TOTAL NEW IMPERVIOUS COVERAGE	191,432 SF OR 4.395 ACRES
CLASSROOM BUILDING HEIGHT - AREA A	27'-0" (1 STORY) "MEASURED TO PARAPET"

PARKING REQUIREMENTS

HOME ROOM - CLASSROOMS		39	CLASSROOMS
2.5 PER HOMEROOM CLASSROOM		97	PARKING SPACES REQUIRED
STUDENTS (K-6TH)		900	STUDENTS
PARKING REQUIRED 1/25 STUDENTS 900/25		36	PARKING SPACES REQUIRED
PARKING PROVIDED			
PARKING ELEMENTARY SCHOOL	FRONT (9.0' X 20.0')	44	SPACES
	(9.0' X 18.0')	41	SPACES
	HC SPACES	4	SPACES
	REAR (9.0' X 18.0')	63	SPACES
	HC SPACES	2	SPACES
	KITCHEN (9.0' X 20.0')	6	SPACES
	HC SPACES	2	SPACES
TOTAL PARKING PROVIDED		161	SPACES

ARCHITECT

STANTEC
5717 LEGACY DRIVE, SUITE 250
PLANO, TEXAS 75024
(214) 473-2400

ENGINEER

GLENN ENGINEERING
105 DECKER COURT, SUITE 910
IRVING, TEXAS 75062
(972) 717-5151

OWNER

ROCKWALL I.S.D.
1050 WILLIAMS STREET
ROCKWALL, TEXAS 75087
972-771-0605

Date: October 12, 2018
Case Number: SP2018-032

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

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PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

ROCKWALL INDEPENDENT SCHOOL DISTRICT

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
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Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal
STATE OF TEXAS
MIKE GLENN
35059
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The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

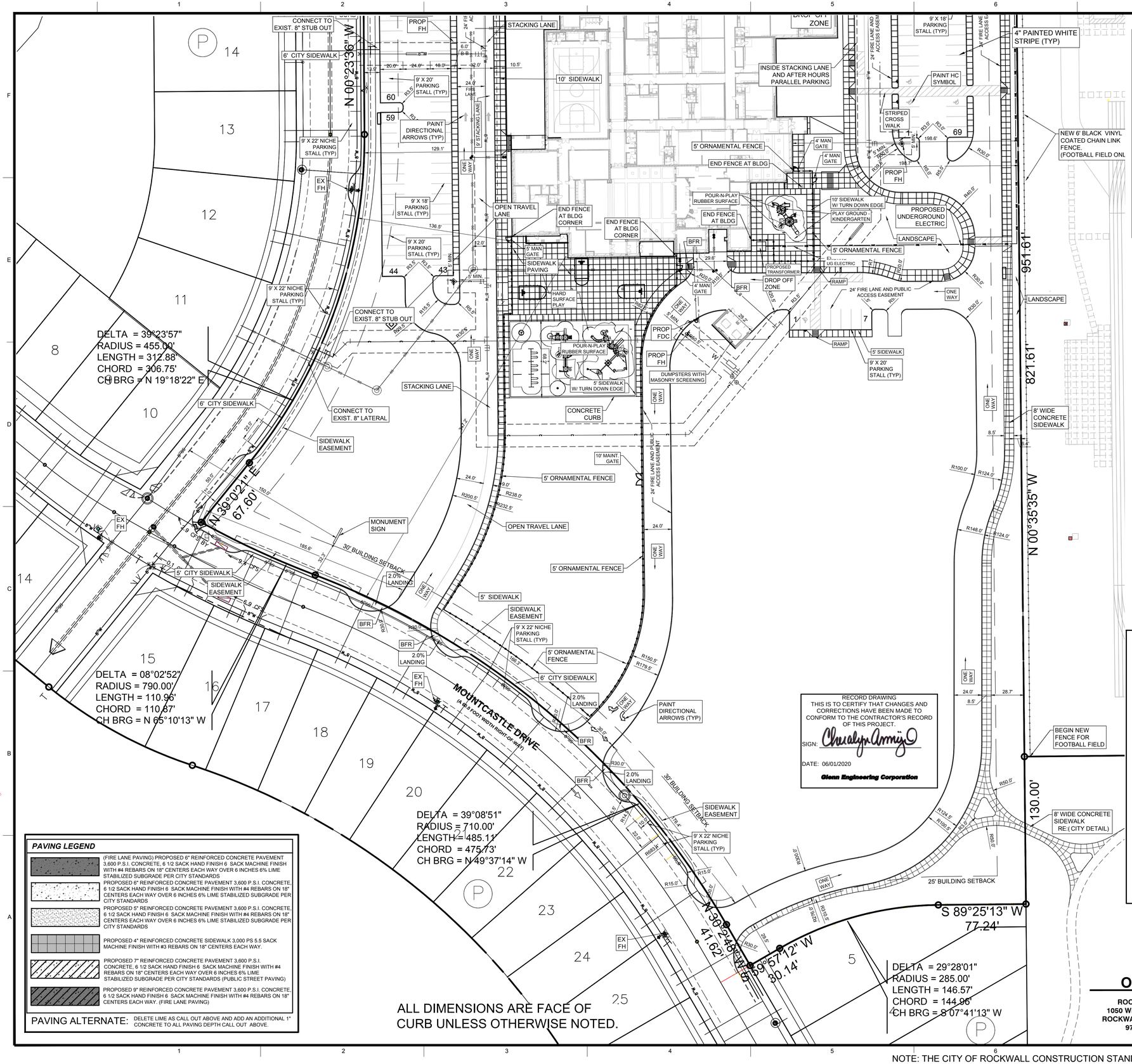
Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
DETAILED SITE PLAN - NORTH

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 03.01

Plotted: Jun 1, 2020, 1:41 PM by user: john - Saved: 6/1/2020 by user: john
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK ELEM ENG - RECORD SET.dwg



GENERAL SITE NOTES

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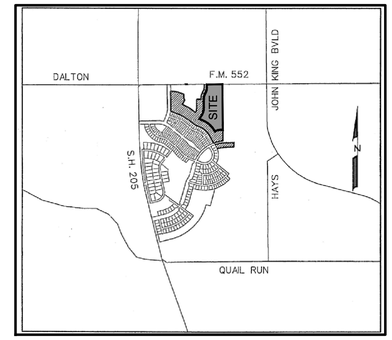
12. ADHERENCE TO ENGINEERING AND FIRE DEPARTMENT STANDARDS SHALL BE REQUIRED

N

0 40 80

Scale 1" = 40'



VICINITY MAP

N.T.S.

SITE DATA SUMMARY TABLE

EXISTING ZONING	SF-10
PROPOSED ZONING	SF-10
USE	PUBLIC ELEMENTARY SCHOOL
LOT AREA	711,422 SQ. FT. OR 16.332 ACRES
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TOTAL NEW IMPERVIOUS COVERAGE	191,432 SF OR 4.395 ACRES
CLASSROOM BUILDING HEIGHT - AREA A	27'-0" (1 STORY) "MEASURED TO PARAPET"

PARKING REQUIREMENTS

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2.5 PER HOMEROOM CLASSROOM			97	PARKING SPACES REQUIRED
STUDENTS (K-6TH)			900	STUDENTS
PARKING REQUIRED 1/25 STUDENTS 900/25			36	PARKING SPACES REQUIRED
PARKING PROVIDED				
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		HC SPACES	2	SPACES
	KITCHEN	(9.0' X 20.0')	6	SPACES
		HC SPACES	2	SPACES
TOTAL PARKING PROVIDED			161	SPACES

PAVING LEGEND

- (FIRE LANE PAVING) PROPOSED 6" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS
- PROPOSED 6" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS
- PROPOSED 5" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS
- PROPOSED 4" REINFORCED CONCRETE SIDEWALK 3,000 PS 5.5 SACK MACHINE FINISH WITH #3 REBARS ON 18" CENTERS EACH WAY.
- PROPOSED 7" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS (PUBLIC STREET PAVING)
- PROPOSED 9" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY. (FIRE LANE PAVING)

PAVING ALTERNATE: DELETE LIME AS CALL OUT ABOVE AND ADD AN ADDITIONAL 1" CONCRETE TO ALL PAVING DEPTH CALL OUT ABOVE.

ARCHITECT

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5717 LEGACY DRIVE, SUITE 250
PLANO, TEXAS 75024
(214) 473-2400

ENGINEER

GLENN ENGINEERING
105 DECKER COURT, SUITE 910
IRVING, TEXAS 75062
(972) 717-5151

OWNER

ROCKWALL I.S.D.
1050 WILLIAMS STREET
ROCKWALL, TEXAS 75087
972-771-0605

Date: October 12, 2018
Case Number: SP2018-032

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Stantec

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4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

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2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Issued

Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
REGISTERED
ENGINEER

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
DETAILED SITE PLAN - SOUTH

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 03.02

Plotted: Jun 1, 2020, 1:42 PM by user: john - Saved: 6/1/2020 by user: john
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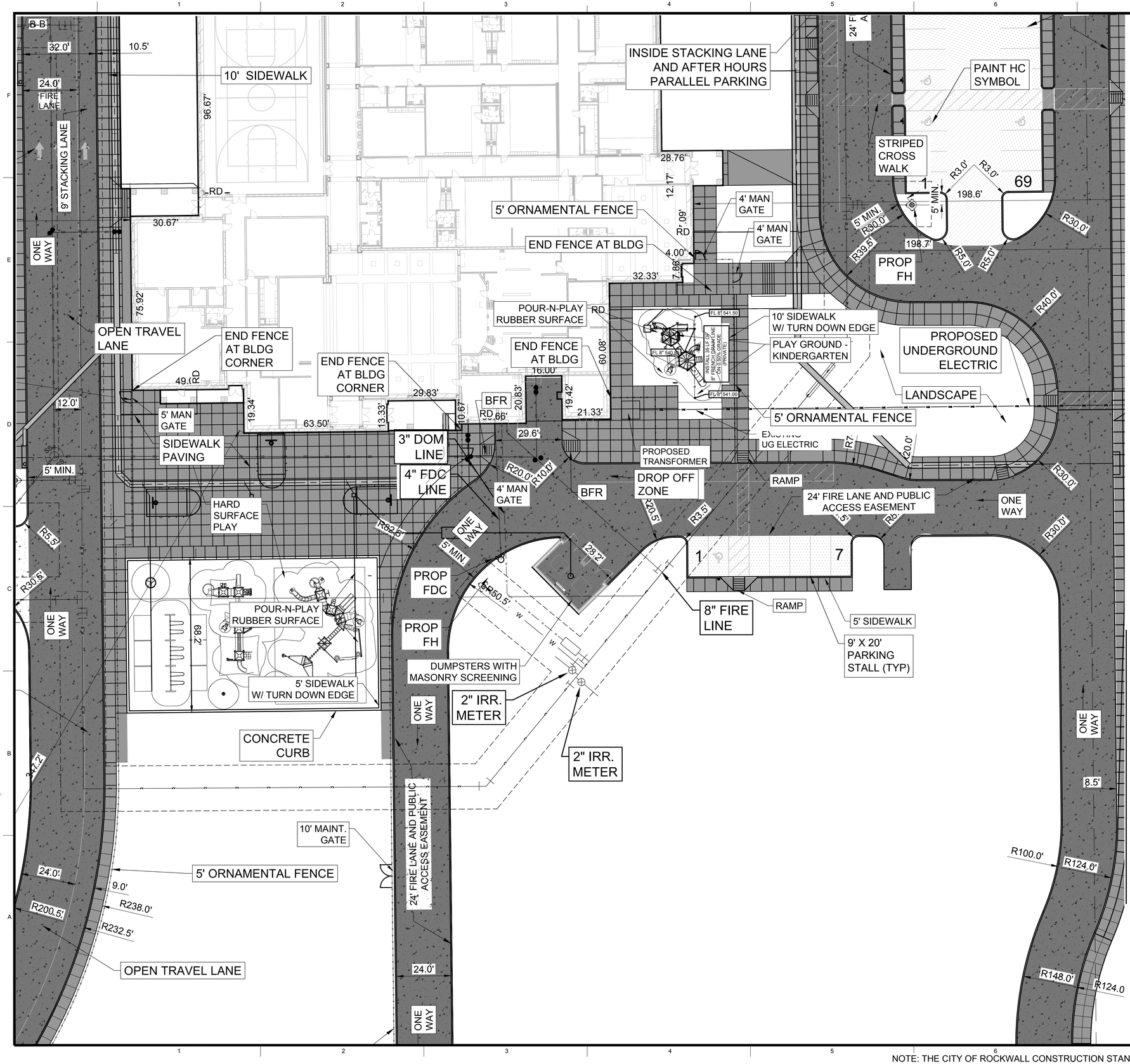

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N

0 10 20 40

Scale 1" = 20'

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.

SIGN:

DATE: 06/01/2020

Glenn Engineering Corporation

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

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T.B.P.E. FIRM REGISTRATION NO. F - 303
PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
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Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project

Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title

DETAILED SITE PLAN -PLAYGROUND

Project No.	Scale
214000654	AS SHOWN

Revision: 8

Drawing No.: C 03.03

Plotted: Jun 1, 2020, 1:43 PM by user: john - Saved: 6/1/2020 by user: john
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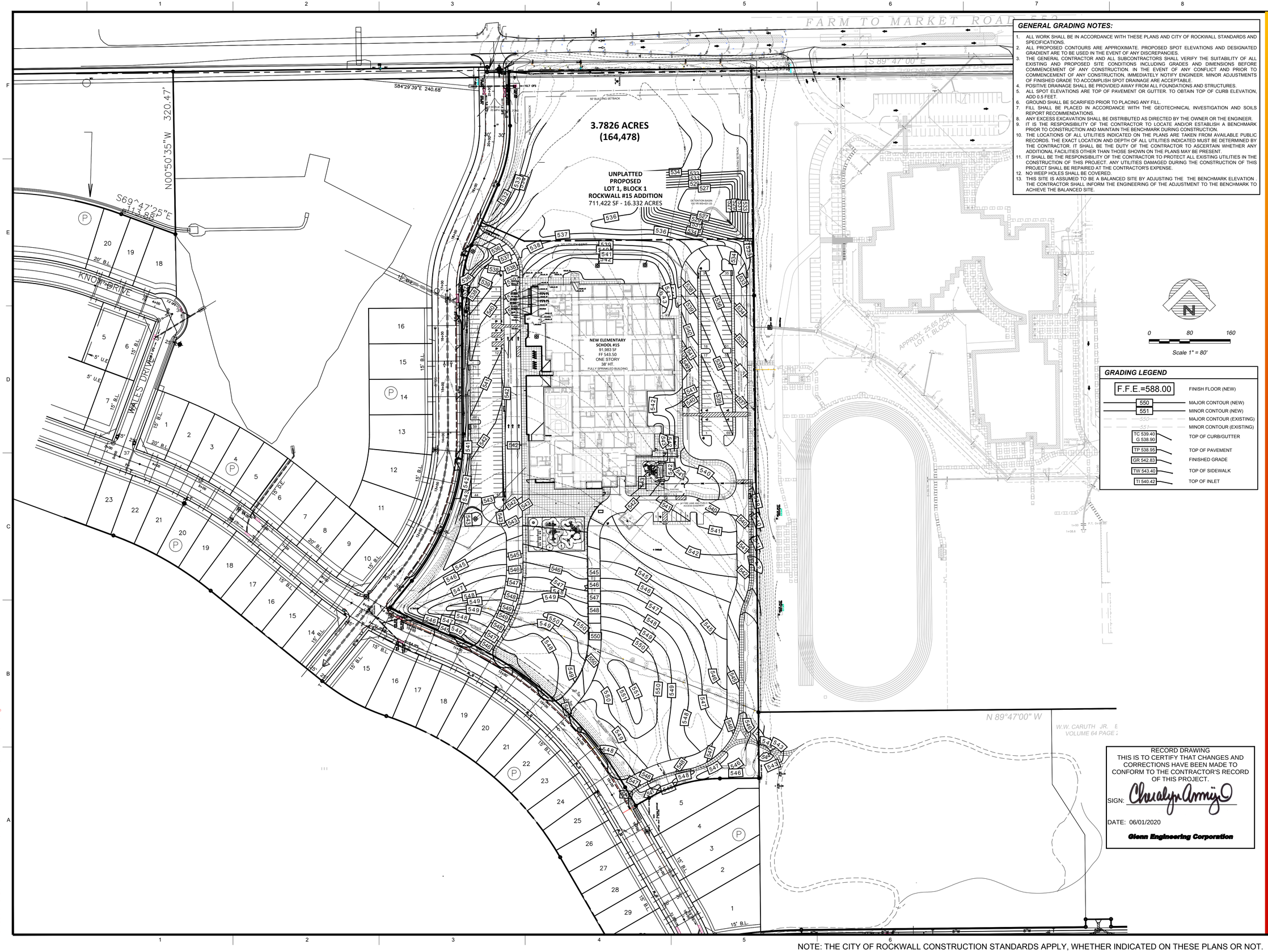

GENERAL GRADING NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THESE PLANS AND CITY OF ROCKWALL STANDARDS AND SPECIFICATIONS.
2. ALL PROPOSED CONTOURS ARE APPROXIMATE. PROPOSED SPOT ELEVATIONS AND DESIGNATED GRADIENT ARE TO BE USED IN THE EVENT OF ANY DISCREPANCIES.
3. THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF ANY CONSTRUCTION. IN THE EVENT OF ANY CONFLICT AND PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, IMMEDIATELY NOTIFY ENGINEER. MINOR ADJUSTMENTS OF FINISHED GRADE TO ACCOMPLISH SPOT DRAINAGE ARE ACCEPTABLE.
4. POSITIVE DRAINAGE SHALL BE PROVIDED AWAY FROM ALL FOUNDATIONS AND STRUCTURES.
5. ALL SPOT ELEVATIONS ARE TOP OF PAVEMENT OR GUTTER. TO OBTAIN TOP OF CURB ELEVATION, ADD 0.5 FEET.
6. GROUND SHALL BE SCARIFIED PRIOR TO PLACING ANY FILL.
7. FILL SHALL BE PLACED IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION AND SOILS REPORT RECOMMENDATIONS.
8. ANY EXCESS EXCAVATION SHALL BE DISTRIBUTED AS DIRECTED BY THE OWNER OR THE ENGINEER.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND/OR ESTABLISH A BENCHMARK PRIOR TO CONSTRUCTION AND MAINTAIN THE BENCHMARK DURING CONSTRUCTION.
10. THE LOCATIONS OF ALL UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE PUBLIC RECORDS. THE EXACT LOCATION AND DEPTH OF ALL UTILITIES INDICATED MUST BE DETERMINED BY THE CONTRACTOR. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.
11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES IN THE CONSTRUCTION OF THIS PROJECT. ANY UTILITIES DAMAGED DURING THE CONSTRUCTION OF THIS PROJECT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
12. NO WEEP HOLES SHALL BE COVERED.
13. THIS SITE IS ASSUMED TO BE A BALANCED SITE BY ADJUSTING THE THE BENCHMARK ELEVATION . THE CONTRACTOR SHALL INFORM THE ENGINEERING OF THE ADJUSTMENT TO THE BENCHMARK TO ACHIEVE THE BALANCED SITE.

GRADING LEGEND

F.F.E.=588.00	FINISH FLOOR (NEW)
550	MAJOR CONTOUR (NEW)
551	MINOR CONTOUR (NEW)
550	MAJOR CONTOUR (EXISTING)
551	MINOR CONTOUR (EXISTING)
TC 539.40 / G 538.90	TOP OF CURB/GUTTER
TP 538.95	TOP OF PAVEMENT
GR 542.83	FINISHED GRADE
TW 543.40	TOP OF SIDEWALK
TI 540.42	TOP OF INLET

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.

SIGN: Chrislyn Armijo

DATE: 06/01/2020

Glenn Engineering Corporation

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PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

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Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
LICENSED
PROFESSIONAL
ENGINEER

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Client/Project

Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title

OVERALL
GRADING PLAN

Project No.	Scale
214000654	AS SHOWN

Revision	Drawing No.
8	C 04.00

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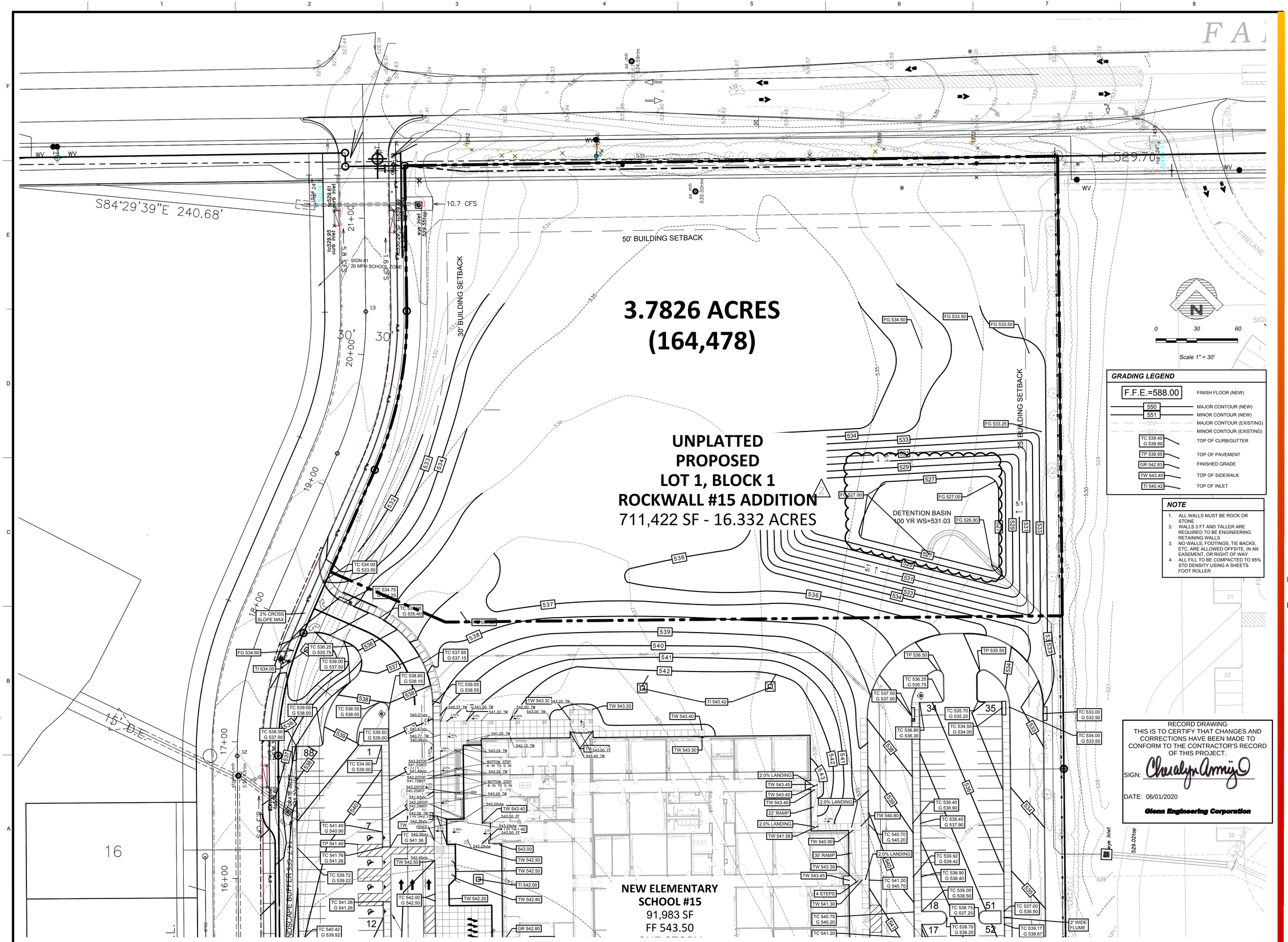

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Consultants

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T.B.P.E. FIRM REGISTRATION NO. F - 303
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4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.15
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02

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100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

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Client/Project

Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title

NORTH DETAILED GRADING PLAN

Project No.	Scale
214000654	AS SHOWN

Revision	Drawing No.
8	C04.01

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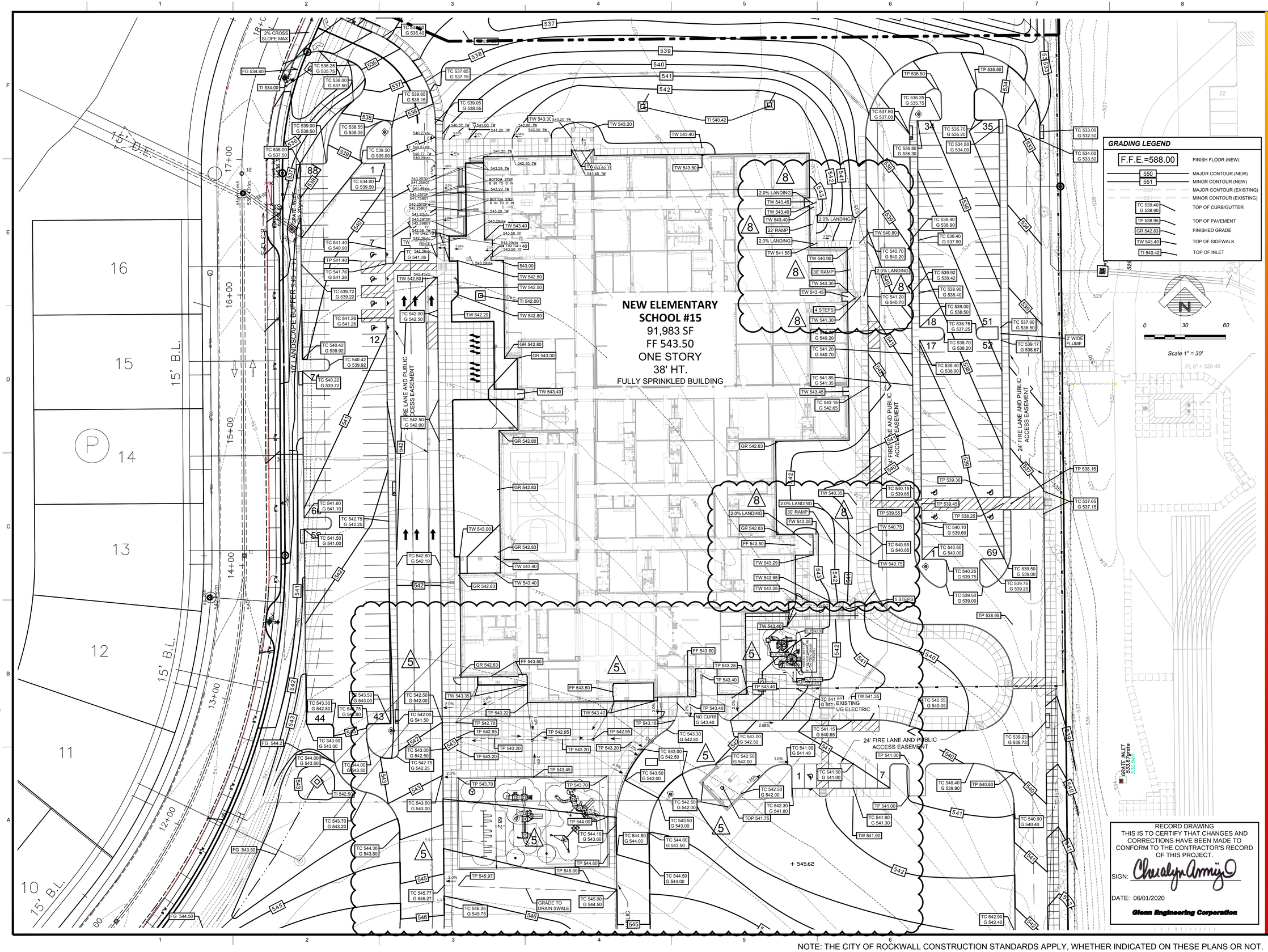

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Client/Project

Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

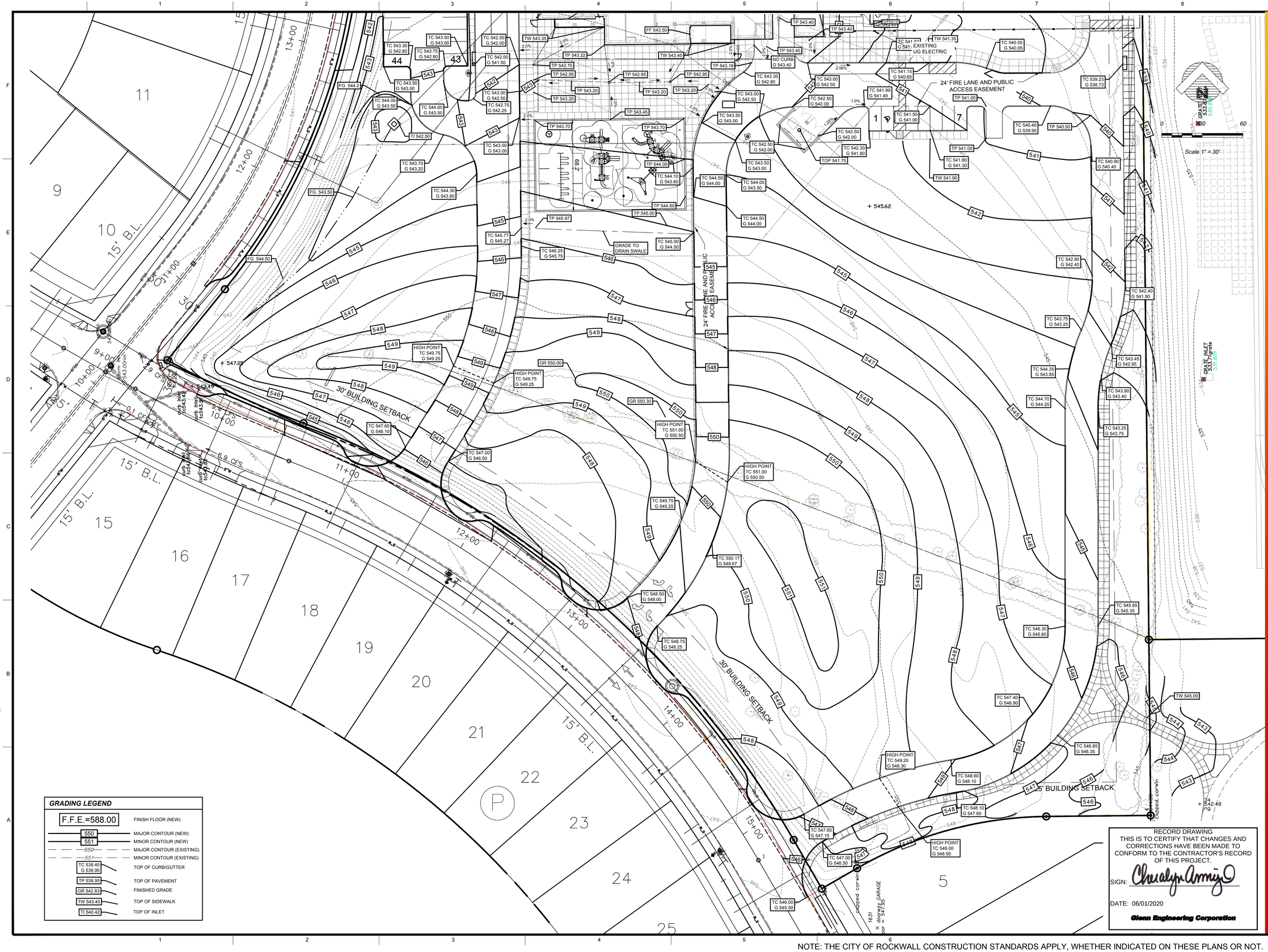
Title

MIDDLE DETAILED GRADING PLAN

Project No.	Scale
214000654	AS SHOWN

Revision 8

Drawing No. C04.02



GRADING LEGEND	
F.F.E.=588.00	FINISH FLOOR (NEW)
550	MAJOR CONTOUR (NEW)
551	MINOR CONTOUR (NEW)
550	MAJOR CONTOUR (EXISTING)
551	MINOR CONTOUR (EXISTING)
TC 539.40 G 538.90	TOP OF CURB/GUTTER
TP 538.95	TOP OF PAVEMENT
GR 542.83	FINISHED GRADE
TW 543.40	TOP OF SIDEWALK
TI 540.42	TOP OF INLET

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN:
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Glenn Engineering Corporation

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4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

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Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
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PROFESSIONAL ENGINEER

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Client/Project
Rockwall ISD

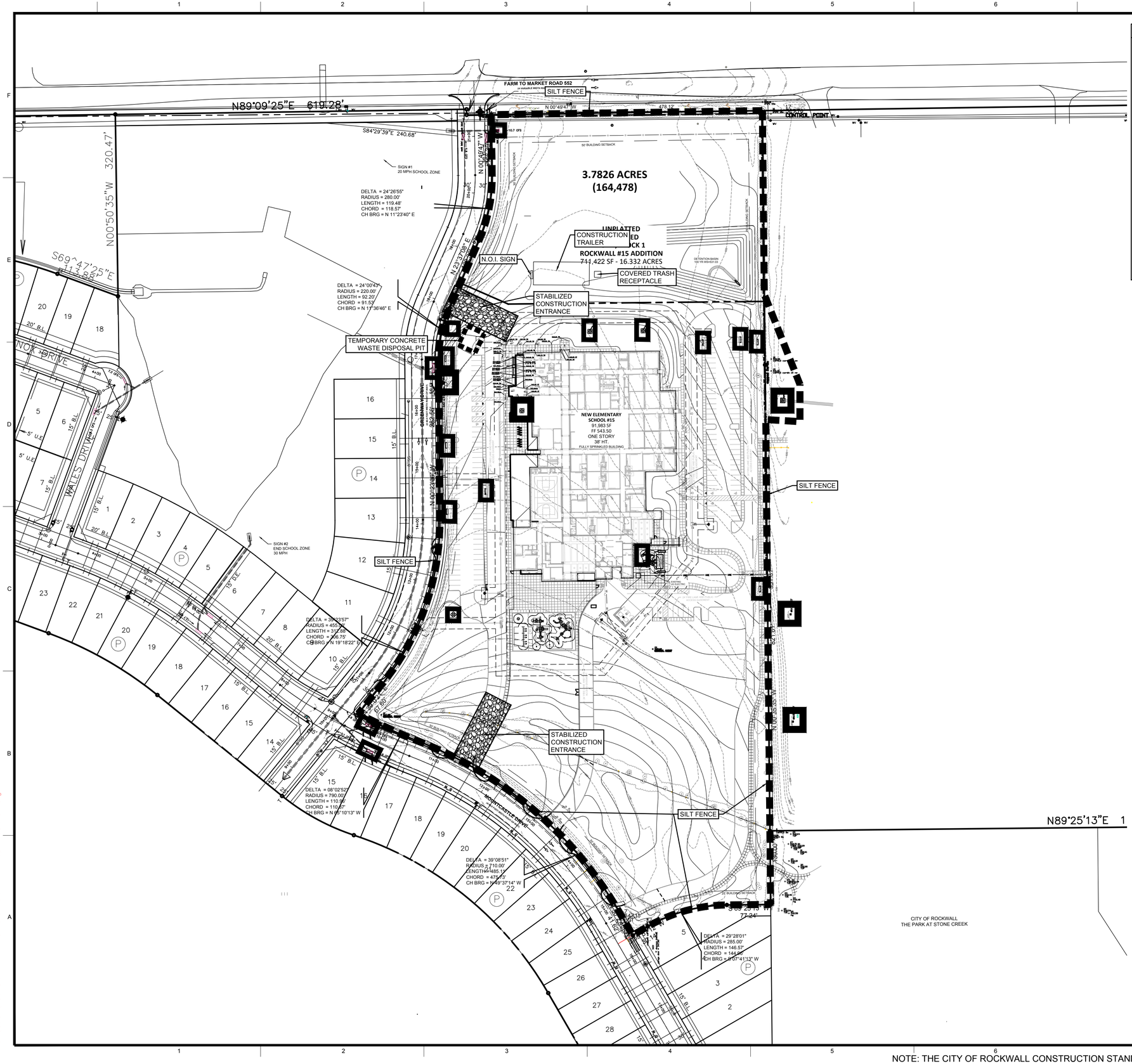
Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
SOUTH DETAILED GRADING PLAN

Project No.	Scale
214000654	AS SHOWN

Revision	Drawing No.
8	C04.03



SEDIMENT CONTROL NOTES:

1. CONTRACTOR TO CHOOSE LOCATION OF CONSTRUCTION ENTRANCE. THIS ENTRANCE MUST BE USED BY ALL TRAFFIC ENTERING OR EXITING THE SITE. SEE SHEET C4.05 FOR STABILIZED CONSTRUCTION ENTRANCE DETAILS.
2. SEDIMENT CONTROL DEVICES SHALL BE INSTALLED ACCORDING TO THE CONTRACT DOCUMENTS AND AS DIRECTED BY THE ENGINEER. ALL DEVICES SHALL BE MAINTAINED SUCH THAT THEY FUNCTION AS INTENDED THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD. THE STONE FROM ROCK CHECK DAMS SHALL BE USED AS ENERGY DISSIPATORS FOR PROPOSED STORM SEWER AT CONSTRUCTION COMPLETION.
3. CURB INLET PROTECTION SHALL BE INSTALLED AS SOON AS STORM DRAINAGE HAS BEEN CONSTRUCTED.
4. PLYWOOD INLET PROTECTION TO BE PLACED AT UPSTREAM END OF ALL UNFINISHED PIPING AT DAYS END.
5. ALL SEDIMENT CONTROL MEASURES TO REMAIN IN PLACE UNTIL ENTIRE SITE IS STABILIZED.
6. THE EXTENT AND DURATION OF DISTURBANCE TO THE DRAINAGEWAYS SHALL BE MINIMIZED. THE FOLLOWING CONSTRUCTION SEQUENCE SHALL BE FOLLOWED:
   A. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
   B. INSTALL SILT FENCE PRIOR TO DISTURBING SOIL. PERIMETER SILT FENCE TO BE INSTALLED OUTSIDE OF ANY POINT TO BE DISTURBED.
   C. DURING CONSTRUCTION, INLET PROTECTION SHALL BE INSTALLED AS NEEDED. ALL SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED PER CONTRACT REQUIREMENTS. ALL DISTURBED AREAS WHICH ARE INACTIVE FOR LONG PERIODS OF TIME SHALL BE VEGETATED.
   D. ONLY WHEN ENTIRE SITE IS STABILIZED AND CONSTRUCTION IS COMPLETE, SHALL SEDIMENT CONTROL MEASURES BE REMOVED.
7. CONTRACTOR SHALL CONTROL MUD ACCUMULATION ON ALL STREETS SURROUNDING THE PROJECT. NO MUD ACCUMULATION WILL BE ALLOWED IN PUBLIC STREETS.
8. MAINTAIN ALL FILTERS DURING CONSTRUCTION TO PREVENT ANY BLOCKAGES FROM ACCUMULATED SEDIMENT.
9. ALL PROPOSED PARKING AREAS TO BE PAVED AS SOON AS POSSIBLE AFTER SUBGRADE IS PREPARED.
10. 80% OF ALL DISTURBED AREA SHALL BE COVERED (1 INCH IN HEIGHT) BY GRASS PRIOR TO CITY ACCEPTANCE.
11. ALL DETENTION FACILITIES SHALL BE INSTALLED AND FUNCTIONAL PER PLANS PRIOR TO ANY PAVING BEING PLACED ON SITE INCLUDING BUILDING FOUNDATION.
12. ALL SIDES, SLOPES AND TOP OF DETENTION BASIN SHALL BE SODDED OR ANCHORED ON SEEDED CURLEX PRIOR TO ANY PAVING BEING PLACED INCLUDING BUILDING FOUNDATION.
13. DETENTION BASIN SHALL BE UTILIZED AS SEDIMENT CONTROL BASIN DURING CONSTRUCTION OPERATIONS AND SHALL BE SIZED AND DETAILED PER THE REQUIREMENTS OF TCEQ.
14. ALL RIGHT-OF-WAYS TO BE SODDED.

LEGEND

- = INSTALL SILT FENCE
- = INSTALL ROCK CHECK DAM
- = INSTALL CURB INLET PROTECTION
- = INSTALL AREA DRAIN INLET PROTECTION
- = INSTALL SEDIMENT POND AT CURB INLET, WYE INLET OR AREA DRAIN

N

0 40 80 160

Scale: 1"=80'

NOTE:
SEE SWPPP DETAILS
SHEET C04.06

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.

SIGN:

DATE: 06/01/2020

Glenn Engineering Corporation

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MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER

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Client/Project

Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title

SWPPP PLAN

Project No.	Scale
214000654	AS SHOWN
Revision	Drawing No.
8	C04.04

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SITE DESCRIPTION

PROJECT NAME & LOCATION: STONE CREEK ELEMENTARY SCHOOL
0000 GREENWAY DRIVE
ROCKWALL, TEXAS 75087

OWNER NAME & ADDRESS: ROCKWALL INDEPENDENT SCHOOL DISTRICT
801 EAST WASHINGTON
ROCKWALL, TEXAS

PROJECT DESCRIPTION: NEW ELEMENTARY SCHOOL

SEQUENCE OF MAJOR ACTIVITIES:
PLACEMENT OF EROSION CONTROL DEVICES
DENUDE SITE
INSTALLATION OF UTILITY LINES
START FOUNDATION OF BUILDINGS
PLACEMENT OF CONCRETE PAVEMENT
COMPLETE BUILDINGS
PLACEMENT OF LANDSCAPE AND GRASS
REMOVAL OF EROSION CONTROL DEVICES

MAJOR SOIL DISTURBING ACTIVITIES:
DENUDE SITE
INSTALLATION OF UTILITY LINES
PLACEMENT OF LANDSCAPE AND GRASS

PRE-DEVELOPMENT RUNOFF COEFFICIENT: 0.50

FINAL RUNOFF COEFFICIENT AFTER CONSTRUCTION: 0.70

TOTAL PROJECT AREA: 25.0 +/- ACRES

TOTAL AREA TO BE DISTURBED: 18.0 +/* ACRES

DESCRIPTION OF EXISTING SOIL: CLAY SOILS

DESCRIPTION OF STABILIZATION OF EXISTING DRAINAGE WAYS:
SILT FENCE
INLET PROTECTION
DETENTION BASIN / SEDIMENT BASIN

DESCRIPTION OF EXISTING QUALITY OF STORM WATER DISCHARGE FOR SITE (IF AVAILABLE):
CITY STREETS
EXISTING STREAM

NAME OF RECEIVING WATERS:
CITY CURB AND GUTTER
CURB AND GUTTER ALONG ROADWAYS
ENCLOSED STORM SEWERS
COTTONWOOD CREEK/LAKE RAY HUBBARD

ADDITIONAL COMMENTS:

ESTIMATED PROJECT START DATE: APRIL 2019

ESTIMATED PROJECT END DATE: JULY 2020

LATITUDE: 32°56'50" N

LONGITUDE 96°23'33" W

NAME OF RECEIVING WATER CREEK TO LAKE RAY HUBBARD

SEQUENCE AND TIMING OF INDICATED EROSION CONTROL PRACTICES AND/OR FEATURES

(INCLUDE TREATMENT OF STOCKPILED DIRT FOR FUTURE USE)

PRIOR TO STARTING CONSTRUCTION:
PLACEMENT OF SILT FENCES
INSTALLATION OF INLET PROTECTION FOR STREET INLETS

DURING CONSTRUCTION:
INSPECTION AND MAINTENANCE OF SILT FENCES
INSTALLATION OF INLET PROTECTION FOR ON-SITE PAVING

COMPLETION OF SITE:
INSTALLATION OF LANDSCAPE AND GRASS
REMOVAL OF EROSION CONTROL DEVICES

SITE RATING FACTOR UTILIZING INDICATED EROSION CONTROL & MEASURES = 0.70
(MUST BE 0.70 OR LARGER)

EROSION AND SEDIMENT CONTROLS

STABILIZATION PRACTICES

DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITY HAS CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITIES ARE SCHEDULED TO RESUME WITHIN 21 DAYS.

TEMPORARY	PERMANENT	
X	X	SEED OR SOD
	X	VEGETATION OTHER THAN SEED OR SOD
X	X	EROSION CONTROL MATS
		PRESERVATION OF NATURAL VEGETATION
		OTHER (DESCRIBE)

ADDITIONAL COMMENTS:

STRUCTURAL PRACTICES

TEMPORARY	PERMANENT	
X		SILT FENCE
		HAY BALES
X		ROCK BERMS
		DIVERSION,INTERCEPTOR, OR PERIMETER DIKES
		DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
		PIPE SLOPE DRAIN
		TRIANGULAR SEDIMENT FILTER DIKE
X		INLET PROTECTION
		STONE OUTLET SEDIMENT TRAP
		SEDIMENT BASIN (REQUIRED FOR 10 ACRES OR LARGER WHERE ATTAINABLE)
		CHECK DAM
		TEMPORARY SEDIMENT TANK
X		STABILIZED CONSTRUCTION ENTRY
		SANDBAG BERM
		OTHER (DESCRIBE):

ADDITIONAL COMMENTS:

OTHER ADDITIONAL STORM WATER MANAGEMENT FEATURES

PERMANENT	
X	CURB & GUTTER
X	STORM SEWER INLETS
X	STORM SEWER
X	CULVERTS
	STORM WATER DETENTION POND
	VELOCITY DISSIPATION DEVICES
	OTHER (DESCRIBE):

ADDITIONAL COMMENTS:

EROSION AND SEDIMENT CONTROLS

MAINTENANCE/INSPECTION PROCEDURES

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A RAIN GAUGE UTILIZING MIN. 0.1 INCH INCREMENTS AT THE PROJECT SITE.
2. CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF ANY STORM EVENT OF 0.5 INCH OR GREATER. IF A REPAIR IS NECESSARY IT WILL BE DONE AT THE EARLIEST PRACTICABLE DATE.
3. INSPECTION WILL BE PERFORMED BY THE OWNERS REPRESENTATIVE AT LEAST ONCE A WEEK AS WELL AS AFTER EVERY 0.5 INCH OF RAIN OR GREATER. AN INSPECTION AND MAINTENANCE REPORT WILL BE MADE FOR EACH INSPECTION AND KEPT AT THE PROJECT SITE. THE INSPECTION SHOULD USE THE OPERATOR INSPECTION FORM IN THE NCTCOG CONSTRUCTION BMP MANUAL OR OTHER FORM APPROVED BY THE CITY.
4. THE CONTRACTOR SHALL KEEP RECORDS OF THE CONSTRUCTION ACTIVITY ON THE SITE.

OTHER (DESCRIBE)

OTHER BEST MANAGEMENT (HOUSEKEEPING) PRACTICES

THE FOLLOWING INDICATED PRACTICES SHALL BE FOLLOWED:

LIME STABILIZATION
X ATTACHED BMP S-11 FROM NCTCOG CONSTRUCTION BMP MANUAL
— OTHER (DESCRIBE):

SOLID WASTE MANAGEMENT
X ATTACHED BMP W-2 FROM NCTCOG CONSTRUCTION BMP MANUAL
— OTHER (DESCRIBE):

HAZARDOUS WASTE MANAGEMENT
X ATTACHED BMP W-2 FROM NCTCOG CONSTRUCTION BMP MANUAL
— STORAGE AREAS (DESCRIBE):

— OTHER (DESCRIBE):

CONCRETE WASTE MANAGEMENT
X ATTACHED BMP W-3 FROM NCTCOG CONSTRUCTION BMP MANUAL
— OTHER (DESCRIBE):

SANDBLASTING WASTE MANAGEMENT
X ATTACHED BMP W-4 FROM NCTCOG CONSTRUCTION BMP MANUAL
— OTHER (DESCRIBE):

DUST REDUCTION MEASURES
X DISTURBED AREAS DAMPENED PERIODICALLY FOR DUST CONTROL
— EXCESS DIRT ON ADJACENT ROADS REMOVED DAILY
— OTHER (DESCRIBE):

SIGNATORY REQUIREMENTS

THE CITY HAS ADOPTED THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) CONSTRUCTION BMP MANUAL. THESE OUTLINES WERE DEVELOPED AS AN AID FOR THOSE PREPARING STORM WATER POLLUTION PREVENTION PLANS (SW3P'S) FOR VARIOUS CONSTRUCTION ACTIVITIES IN THE CITY. THEIR USE DOES NOT RELIEVE THE DESIGN ENGINEER OR OPERATOR(S) FROM COMPLYING WITH THE NCTCOG BMP MANUAL OR THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGE FROM CONSTRUCTION SITES.

THE SW3P SHALL BE SEALED BY A TEXAS REGISTERED PROFESSIONAL ENGINEER AND CERTIFIED BY THE OWNER THAT THE INFORMATION IS TRUE AND THAT THEY ASSUME RESPONSIBILITY FOR THE PLAN. ADDITIONALLY, THEY SHALL CERTIFY THAT THE PLAN MEETS STATE AND LOCAL REQUIREMENTS FOR EROSION AND SEDIMENT CONTROL AND STORM WATER QUALITY. IN ALL CASES, A DULY AUTHORIZED REPRESENTATIVE AS INDICATED IN THE GENERAL PERMIT MAY CERTIFY THIS PLAN.

PRIOR TO THE COMMENCEMENT OF WORK, THE OWNER AND GENERAL CONTRACTOR MUST SUBMIT NOTICES OF INTENT (NOI) AS CO-PERMITTEES TO DISCHARGE STORM WATER FROM A CONSTRUCTION SITE UNDER THE NPDES PERMIT. ADDITIONALLY, ALL CONTRACTORS AND SUBCONTRACTORS (INCLUDING FRANCHISE UTILITIES) WHOSE ACTIVITIES IMPACT THE SW3P MUST SIGN AN APPROVED CERTIFICATION THAT THEY UNDERSTAND THEIR RESPONSIBILITIES UNDER THE PLAN. NO WORK WILL BE ALLOWED UNTIL COPIES OF ALL APPROPRIATE NOI'S AND CERTIFICATIONS ARE RECEIVED BY THE CITY.

ALLOWABLE NON-STORM WATER DISCHARGES

- DISCHARGES FROM FIRE FIGHTING ACTIVITIES.
- FIRE HYDRANT FLUSHINGS. *
- WATER USED TO WASH VEHICLES OR CONTROL DUST.
- POTABLE WATER SOURCES (INCLUDING WATERLINE FLUSHINGS CONTAINING LESS THAN 1000 GALLONS). *
- UNCONTAMINATED GROUND WATER (INCLUDING DEWATERING GROUNDWATER INFILTRATION).
- FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS.
- SPRINGS, RIPARIAN HABITATS, WETLANDS AND UNCONTAMINATED GROUNDWATER.
- IRRIGATION WATER.
- EXTERIOR BUILDING WASH DOWN WITHOUT DETERGENTS.
- PAVEMENT WASH WATERS WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (UNLESS ALL SPILL MATERIAL HAS BEEN REMOVED) AND WHERE DETERGENTS ARE NOT USED.
- AIR CONDITIONING CONDENSATE.

* HEAVILY CHLORINATED WATER (3.5 MG/L OR GREATER FREE CHLORINE) RESULTING FROM WATER LINE STERILIZATION SHALL BE DIRECTED UNDER PERMIT TO THE SANITARY SEWER UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL APPLY TO THE ENGINEERING DEPARTMENT FOR A SANITARY SEWER DISCHARGE PERMIT AFTER THE MANDATORY CHLORINE RETENTION TIME (USUALLY 24 HOURS). THE HEAVILY CHLORINATED WATER MAY BE DISCHARGED TO THE SANITARY SEWER, BEGINNING TWO WORKING DAYS AFTER PERMIT APPLICATION.

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SIGN:
DATE: 06/01/2020
Glenn Engineering Corporation

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PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

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Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal
STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER
The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD
Elementary School #15
2911 Greenway Drive
Rockwall, TX 75087

Title
SWPPP DETAILS

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 04.05

Plotted: Jun 1, 2020, 1:50 PM by user: john - Saved: 6/1/2020 by user: john
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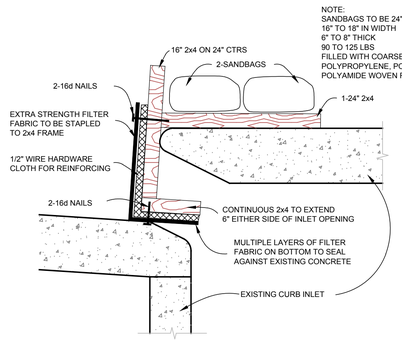
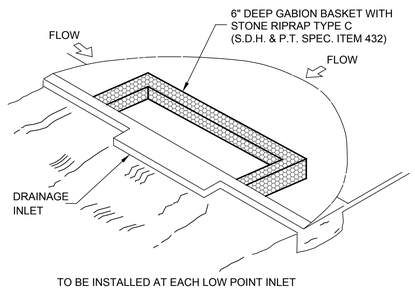
EROSION CONTROL PLAN



NOTE:
SANDBAGS TO BE 24" TO 30" IN LENGTH
16" TO 18" IN WIDTH
6" TO 8" THICK
90 TO 125 LBS
FILLED WITH COARSE SAND AND BE POLYPROPYLENE, POLYETHELINE OR POLYAMIDE WOVEN FABRIC.

CURB INLET PROTECTION ON GRADE

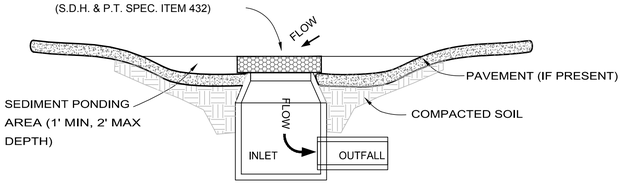
NOT TO SCALE



TO BE INSTALLED AT EACH LOW POINT INLET

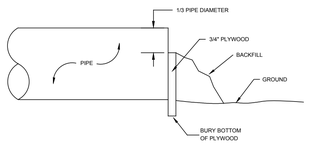
LOW POINT CURB INLET SEDIMENT FILTER

N.T.S.



SEDIMENT POND @ CURB INLETS & AREA DRAINS

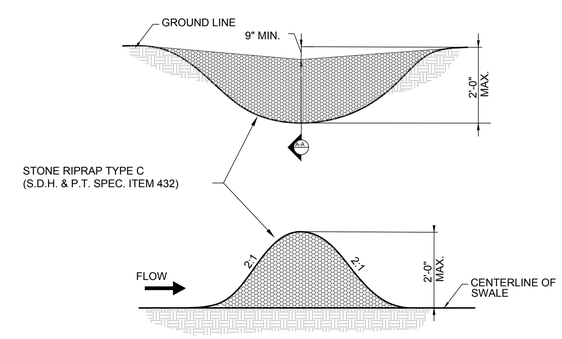
NOT TO SCALE



NOTE:
DUE TO ANY STOPPAGE IN CONSTRUCTION OR AT COMPLETION OF LINE, CONTRACTOR SHALL INSTALL 3/4" PLYWOOD OVER END OF PIPE AND BACKFILL TO SECURELY HOLD IN PLACE TO PREVENT SEDIMENT FROM ENTERING PIPE

PLYWOOD PROTECTION AT PIPE

N.T.S.



SECTION A-A

ROCK CHECK DAM DETAIL

N.T.S.

Solid Waste Management

DESCRIPTION
Large volumes of solid waste are often generated at construction sites including: packaging, pallets, wood waste, concrete waste, soil, electrical wiring, cuttings, and a variety of other materials. The solid waste management practice lists techniques to minimize the potential of storm water contamination from solid waste through appropriate storage and disposal practices.

PRIMARY USE
These practices should be a part of all construction practices. By limiting the trash and debris on site, storm water quality is improved along with reduced clean up requirements at the completion of the project.

APPLICATIONS
The solid waste management practice for construction sites is based on proper storage and disposal practices by construction workers and supervisors.. Key elements of the program are education and modification of improper disposal habits.. Cooperation and vigilance is required on the part of supervisors and workers to ensure that the recommendations and procedures are followed. Following are lists describing the targeted materials and recommended procedures:

- ☐ Targeted Solid Waste Materials
  - Paper and cardboard containers
  - Plastic packaging
  - Styrofoam packing and forms
  - Insulation materials (non-hazardous)
  - Wood pallets
  - Wood cuttings
  - Pipe and electrical cuttings
  - concrete, brick, and mortar waste
  - Shingle cuttings and waste
  - Roofing tar
  - Steel (cuttings, nails, rust residue)
  - Gypsum board cuttings and waste
  - SROK/WALLing cuttings and waste
  - Miscellaneous cuttings and waste
  - Food waste
  - Demolition waste

Storage Procedures
- ☐ Wherever possible, minimize production of solid waste materials.
- ☐ Designate a foreman or supervisor to oversee and enforce proper solid waste procedures.
- ☐ Instruct construction workers in proper solid waste procedures.
- ☐ Segregate potentially hazardous waste from non-hazardous construction site debris.
- ☐ Keep solid waste materials under cover in either a closed dumpster or other enclosed trash container that limits contact with rain and runoff.
- ☐ Store waste materials away from drainage ditches, swales and catch basins.
- ☐ Do not allow trash containers to overflow.
- ☐ Do not allow waste materials to accumulate on the ground.
- ☐ Prohibit littering by workers and visitors.
- ☐ Police area daily for litter and debris.
- ☐ Enforce solid waste handling and storage procedures.

Disposal Procedures
- ☐ If feasible, segregate recyclable wastes from non-recyclable waste materials and dispose of properly.
- ☐ General construction debris may be hauled to a licensed construction debris landfill (typically less expensive than a sanitary landfill).
- ☐ Use waste facilities approved by local jurisdiction.
- ☐ Runoff which comes into contact with unprotected waste shall be directed into structural be dirt treatment such as silt fence to remove debris.

Education
- ☐ Educate all workers on solid waste storage and disposal procedures.
- ☐ Instruct workers in identification of solid waste and hazardous waste.
- ☐ Have regular meetings to discuss and reinforce disposal procedures (incorporate in regular safety seminars).
- ☐ Clearly mark on all solid waste containers which materials are acceptable.

Quality Control
- ☐ Foreman and/or construction supervisor shall monitor on-site solid waste storage and disposal procedures.
- ☐ Discipline workers who repeatedly violate procedures.

Requirements
- ☐ Job-site waste handling and disposal education and awareness program.
- ☐ Commitment by management to implement and enforce Solid Waste Management Program.
- ☐ Compliance by workers.
- ☐ Sufficient and appropriate waste storage containers.
- ☐ Timely removal of stored solid waste materials.
- ☐ Possible modest cost impact for additional waste storage containers.
- ☐ Minimal overall cost impact.

LIMITATIONS
Only addresses non-hazardous solid waste.
One part of a comprehensive construction site management program.

Applications: Perimeter Control; Slope Protection; Sediment Trapping; Channel Protection; Temporary Stabilization; Permanent Stabilization; **Housekeeping Practices**

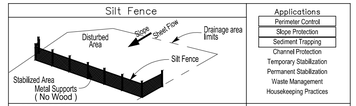
Targeted Constituents: ○ Sediment; ● Nutrients Toxic Materials; ○ Oil & Grease; ● Floatable Materials; ● Other Construction Wastes

Implementation Requirements: ◒ Capital Costs; ◒ Maintenance; ◒ Training; ○ Suitability for Slopes > 5%

Legend: ● Significant Impact; ◒ Medium Impact; ○ Low Impact; ? Unknown or Questionable Impact

W–2

Silt Fence



DESCRIPTION
A silt fence consists of geotextile fabric supported by poultry netting or other backing stretched between metal posts with the lower edge of the fabric securely embedded in the soil. The fence is typically located downstream of disturbed areas to intercept runoff in the form of sheet flow. Silt fence provides both filtration and time for sedimentation to reduce sediment and it reduces the velocity of the runoff. Properly designed silt fence is economical since it can be re-located during construction and re-used on other projects.

PRIMARY USE
Silt fence is normally used as perimeter control located downstream of disturbed areas. It is only feasible for non-concentrated, sheet flow conditions.

APPLICATIONS
Silt fence is an economical means to treat overland, non-concentrated flows for all types of projects. Silt fences are used as perimeter control devices for both site developments and linear (roadway) type projects. They are most effective with coarse to silty soil types. Due to the potential of clogging, silt fence should not be used with clay soil types.

In order to reduce the length of silt fence, it should be placed adjacent to the down slope side of the construction activities.

elevation (along a contour line) where possible.
- ☐ Maximum slope adjacent to the fence is 1:1
- ☐ Maximum distance of flow to silt fence should be 200 feet or less.
- ☐ Maximum concentrated flow to silt fence shall be 1 CFS per 20 feet of fence.
- ☐ If 50% or less of soil, by weight, passes the U.S. Standard sieve No. 200, select the equivalent opening size (E.O.S.) to retain 85% of the soil.
- ☐ Maximum equivalent opening size shall be 70 (#70 sieve).
- ☐ Minimum equivalent opening size shall be 100 (#100 sieve).
- ☐ If 85% or more of soil, by weight, passes the U.S. Standard sieve No. 200, silt fences shall not be used due to potential clogging.
- ☐ Sufficient room for the operation of sediment removal equipment shall be provided between the silt fence and other obstructions in order to properly maintain the fence.
- ☐ The ends of the fence shall be turned upstream to prevent bypass of stormwater, bypass of stormwater.

LIMITATIONS
Minor ponding will likely occur at the upstream side of the silt fence resulting in minor flooding flooding.

Fences which are constructed in swales or low areas subject to concentrated flow may be concentrated overtopped resulting in failure of the filter fence. Silt fences subject to areas of concentrated flow (waterways with flows > 1 cfs) are not acceptable.

Silt fence can interfere with construction operations, therefore planning of access routes onto the site is critical.

Silt fence can fail structurally under heavy storm flows, creating maintenance problems and reducing the effectiveness of the system.

MAINTENANCE REQUIREMENTS
Inspections should be made on a weekly basis, especially after large storm events. If the fabric becomes clogged, it should be cleaned or if necessary, replaced.

Sediment should be removed when it reaches approximately one-half the height of the fence.

Applications: Perimeter Control; **Slope Protection**; Sediment Trapping; Channel Protection; Temporary Stabilization; Permanent Stabilization; Waste Management; Housekeeping Practices

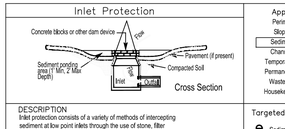
Targeted Constituents: ○ Sediment; ● Nutrients Toxic Materials; ○ Oil & Grease; ◒ Floatable Materials; ○ Other Construction Wastes

Implementation Requirements: ◒ Capital Costs; ● Maintenance; ○ Training; ◒ Suitability for Slopes > 5%

Legend: ● Significant Impact; ◒ Medium Impact; ○ Low Impact; ? Unknown or Questionable Impact

Fe=0.75 S–1

Inlet Protection



DESCRIPTION
Inlet protection consists of a variety of methods of intercepting sediment at low point inlets through the use of stone, filter fabric and other materials. This is normally located at the inlet, providing either detention or filtration to reduce sediment and floatable materials in storm water.

PRIMARY USE
Inlet protection is normally used as a secondary defense in site erosion control due to the limited effectiveness and applicability of the technique. It is normally used in new developments that include new inlets or roads with new curb inlets or during major repairs to existing roadways. Inlet protection has limited use in developed areas due to the potential for flooding, traffic safety and pedestrian safety and maintenance problems. Inlet protection can reduce sediment in storm sewer system by serving as a back up system to on-site controls or by reducing sediment loads from controls with limited effectiveness such as straw bale dikes.

APPLICATIONS
Different variations are used for different conditions as follows:

- ☐ Filter barrier protection (similar to a silt fence barrier around the inlet) is appropriate when the drainage area is less than five (5) percent. This type of protection is not applicable in paved areas. (See details, Section 9)
- ☐ Block and gravel (crushed stone, recycled concrete is also appropriate) protection is used when flows exceed 0.5 cfs and it is necessary to allow for overtopping to prevent flooding (See sketch at top of fact sheet).
- ☐ Wire mesh and gravel protection (crushed stone, recycled concrete is also appropriate) is used when flows exceed 0.5 cfs and construction traffic may occur over the inlet. This form of protection may be used with both curb and drop inlets (See details Section 9).
- ☐ Excavated impoundment protection around a drop inlet may be used for protection against sediment-entering a storm crain system. With this method, it is necessary to install weep holes to allow the impoundment to drain completely. The impoundment shall be sized such that the volume of excavation shall be equal to 1800 to 3600 cubic feet per acre of contributing drainage area entering the inlet for full effectiveness. Smaller volumes can be used for reduced effectiveness (SEE details Section 9).

Filter fabric protection shall be designed and maintained in a manner similar to silt fence.
- ☐ Maximum depth of flow shall be (8) eight inches or less depending on vehicular and pedestrian traffic.
- ☐ Positive drainage is critical in the design of inlet protection. If overflow is not prodded for at the inlet, flows which exceed the capacity of the inlet protection system shall be routed through established swales, streets or other watercourses to minimize damage due to ponding and to provide for public safety.

LIMITATIONS
Ponding will occur at the inlet with possible flooding as a result.

Inlet protection is only viable at low point inlets. Inlets which are on a slope cannot be effectively protected because storm water will bypass the inlet and continue downstream, causing an overload condition at inlets beyond.

MAINTENANCE REQUIREMENTS
Inspections should be made on a weekly basis, especially after large (>0.5 inches) storm events. When silt fence is used and the fabric becomes clogged, it should be cleaned or if necessary, replaced. Also, sediment should be removed when it reaches approximately one-half the height of the fence. If a sump is used, sediment should be removed when the volume of the basin is reduced by 50%.

For systems using stone filters, when the stone filter becomes clogged with sediment, the stones must be pulled away from the inlet and cleaned or replaced. Since cleaning of gravel at a construction site may be difficult, an alternative approach would be to use the clogged stone as fill material and put new stone around the inlet.

Applications: Perimeter Control; **Slope Protection**; Sediment Trapping; Channel Protection; Temporary Stabilization; Permanent Stabilization; Waste Management; Housekeeping Practices

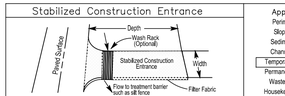
Targeted Constituents: ● Sediment; ○ Nutrients Toxic Materials; ○ Oil & Grease; ◒ Floatable Materials; ○ Other Construction Wastes

Implementation Requirements: ● Capital Costs; ● Maintenance; ○ Training; ○ Suitability for Slopes > 5%

Legend: ● Significant Impact; ◒ Medium Impact; ○ Low Impact; ? Unknown or Questionable Impact

Fe=0.67–0.75 S–4

Stabilized Construction Entrance



DESCRIPTION
A stabilized construction entrance consists of a pad consisting of gravel, crushed stone, or other rock like material on top of geotextile filter cloth to facilitate the wash down and removal of sediment and other debris from construction equipment prior to exiting the construction site. For added effectiveness, a wash rack area can be incorporated into the design to further reduce sediment tracking. For long term projects, cattle guards or other type of permanent rack system can be used in conjunction with a wash rack. This directly addresses the problem of silt and mud deposition in roadways used for construction site access.

PRIMARY USE
Stabilized construction entrances are used primarily for sites in which significant truck traffic occurs on a daily basis. It reduces the need to remove sediment from streets. If used properly, it also directs the majority of traffic to to a single location, reducing the number and quantity of disturbed areas on the site and providing protection for other structural controls through traffic control.

APPLICATIONS
Stabilized construction entrances are a required part of the erosion control plan for all site developments larger than 5 acres and a recommended practice for all construction sites. It is not suitable for long, linear projects. If possible, small entrances should be incorporated into small lot construction due to the large percentage of disturbed area on the site and the high potential for offsite tracking of silt and mud.

DESIGN CRITERIA
- ☐ Stabilized construction entrances are to be constructed such that drainage across the entrance is directed to a controlled, stabilized outlet on site with provisions for storage, proper filtration and removal of wash water.
- ☐ The entrance must be properly graded so that storm water is not allowed to leave the site and enter roadways.
- ☐ Minimum width of entrance shall be 15 feet, but in no case shall the width be less than that of the entry way to be used.
- ☐ Minimum depth of entrance shall be 12 inches for the entire length of the control.
- ☐ Minimum dimensions for entrances of tract areas less than 1 acre shall be an average lot depth of 100 feet with a minimum entrance width of 50 feet and a minimum entrance depth of 20 feet.
- ☐ Minimum 4" to 6" rock, No crushed concrete allowed.

LIMITATIONS
Selection of the construction entrance location is critical in that to be effective, it must be used exclusively.

Stabilized entrances are rather expensive considering that it must be installed in combination with one or more other sediment control techniques, but it may be cost effective compared to labor intensive street cleaning.

MAINTENANCE REQUIREMENTS
Inspections should be made on a regular basis and after large storm events in order to ascertain whether or not sediment and pollution are being effectively detained on site.

When sediment has substantially clogged the void area between the rocks, the aggregate mat must be washed down or replaced.

Periodic re-grading and top dressing with additional stone must be done to keep the efficiency of the entrance from diminishing.

Applications: Perimeter Control; Slope Protection; Sediment Trapping; Channel Protection; **Temporary Stabilization**; Permanent Stabilization; Waste Management; Housekeeping Practices

Targeted Constituents: ● Sediment; ○ Nutrients Toxic Materials; ○ Oil & Grease; ○ Floatable Materials; ○ Other Construction Wastes

Implementation Requirements: ● Capital Costs; ◒ Maintenance; ○ Training; ○ Suitability for Slopes > 5%

Legend: ● Significant Impact; ◒ Medium Impact; ○ Low Impact; ? Unknown or Questionable Impact

Fe=N/A S–9

Concrete Waste Management

DESCRIPTION
Concrete waste at construction sites comes in two forms; 1)excess fresh concrete mix including truck and equipment washing, and 2) concrete dust and concrete debris resulting from demolition. Both forms have the potential to impact water quality through storm water runoff contact with the waste.

PRIMARY USE
Concrete waste is present at most construction sites. This BMP should be utilized at sites in which concrete waste is present.

APPLICATIONS
A number of water quality parameters can be affected by introduction of concrete - especially fresh concrete. Concrete affects the pH of runoff, causing significant chemical changes in water bodies and harming aquatic life. Suspended solids in the form of both cement and aggregate dust are also generated from both fresh and demolished concrete waste.

Current Unacceptable Waste Concrete Disposal Practices
- ☐ Dumping in vacant areas on the job-site.
- ☐ Illicit dumping off-site.
- ☐ Dumping into ditches or drainage facilities.

Recommended Disposal Practices
- ☐ Avoid unacceptable disposal practices listed above.
- ☐ Develop pre-determined, safe concrete disposal areas.
- ☐ Provide a washout area with a minimum of 6 cubic feet of containment area volume for every 10 cubic yards of concrete poured.
- ☐ Never dump waste concrete illicitly or without property owners knowledge and consent.
- ☐ Treat runoff from storage areas through the use of structural controls as required.

Education
- ☐ Drivers and equipment operators should be instructed on proper disposal and equipment washing practices (see above).
- ☐ Supervisors must be made aware of the potential environmental consequences of improperly handled concrete waste.

Enforcement
- ☐ The construction site manager or foreman must ensure that employees and pre-mix companies follow proper procedures for concrete disposal and equipment washing.
- ☐ Employees violating disposal or equipment cleaning directives must be re-educated or disciplined if necessary.

Demolition Practices
- ☐ Monitor weather and wind direction to ensure concrete dust is not entering drainage structures and surface waters. Where appropriate, construct sediment traps or other types of sediment detention devices downstream of demolition activities.

Requirements
- ☐ Use pre-determined disposal sites for waste concrete.
- ☐ Prohibit dumping waste concrete anywhere but pre-determined areas.
- ☐ Assign pre-determined truck and equipment washing areas
- ☐ Educate drivers and operators on proper disposal and equipment cleaning procedures.

Education
- ☐ Minimal cost impact for training and monitoring.
- ☐ Concrete disposal cost depends on availability and distance to suitable disposal areas.
- ☐ Additional costs involved in equipment washing could be significant.

LIMITATIONS
This concrete waste management program is one part of a comprehensive construction site waste management program.

Applications: Perimeter Control; Slope Protection; Sediment Trapping; Channel Protection; Temporary Stabilization; Permanent Stabilization; Waste Management; **Housekeeping Practices**

Targeted Constituents: ○ Sediment; ● Nutrients Toxic Materials; ○ Oil & Grease; ● Floatable Materials; ● Other Construction Wastes

Implementation Requirements: ◒ Capital Costs; ◒ Maintenance; ◒ Training; ○ Suitability for Slopes > 5%

Legend: ● Significant Impact; ◒ Medium Impact; ○ Low Impact; ? Unknown or Questionable Impact

W–3

ALLOWABLE NON–STORM WATER DISCHARGES

- DISCHARGES FROM FIRE FIGHTING ACTIVITIES.
- FIRE HYDRANT FLUSHINGS. *
- WATER USED TO WASH VEHICLES OR CONTROL DUST.
- POTABLE WATER SOURCES (INCLUDING WATERLINE FLUSHINGS CONTAINING LESS THAN 1000 GALLONS). *
- UNCONTAMINATED GROUND WATER (INCLUDING DEWATERING GROUNDWATER INFILTRATION).
- FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS SUCH AS SOLVENTS.
- SPRINGS, RIPARIAN HABITATS, WETLANDS AND UNCONTAMINATED GROUNDWATER.
- IRRIGATION WATER.
- EXTERIOR BUILDING WASH DOWN WITHOUT DETERGENTS.
- PAVEMENT WASH WATERS WHERE SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED (UNLESS ALL SPILL MATERIAL HAS BEEN REMOVED) AND WHERE DETERGENTS ARE NOT USED.
- AIR CONDITIONING CONDENSATE.

* HEAVILY CHLORINATED WATER (3.5 MG/L OR GREATER FREE CHLORINE) RESULTING FROM WATER LINE STERILIZATION SHALL BE DIRECTED UNDER PERMIT TO THE SANITARY SEWER UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL APPLY TO THE ENGINEERING DEPARTMENT FOR A SANITARY SEWER DISCHARGE PERMIT AFTER THE MANDATORY CHLORINE RETENTION TIME (USUALLY 24 HOURS). THE HEAVILY CHLORINATED WATER MAY BE DISCHARGED TO THE SANITARY SEWER, BEGINNING TWO WORKING DAYS AFTER PERMIT APPLICATION.

Legend

- —SF— Silt Fence
- — — — Limits of Construction
- ———— Property Boundary
- —600— Elevation Contours
- Building Building Foot Print
- ⚿ Covered Trash
- ⟶ Direction of Storm Water Runoff Flow
- ⚿ Covered Storage
- ▨ Vegetated/Preserved Buffer Strip
- Ⓒ Concrete Wash Area
- ⁂ Inlet Protection
- North Arrow
- ▨ Stabilized Construction Entrance
- ☐Rock ☐Dolly Mulch
- ☐Swale ☐Other (Specify)
- ☐Erosion Mat

MAINTENANCE AND INSPECTION PROCEDURES: CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF ANY STORM EVENT OR 0.5 INCHES OR GREATER. IF A REPAIR IS NECESSARY IT WILL BE DONE AT THE EARLIEST PRACTICABLE DATE BUT WITHIN 48 HOURS.

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN: Cheralyn Armijo
DATE: 06/01/2020
Glenn Engineering Corporation

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Stantec
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Plano, TX 75024-4246
Tel: (214) 473-2400 / Fax: (214) 473-2401
www.stantec.com

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Consultants

GLENN ENGINEERING
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PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02

Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

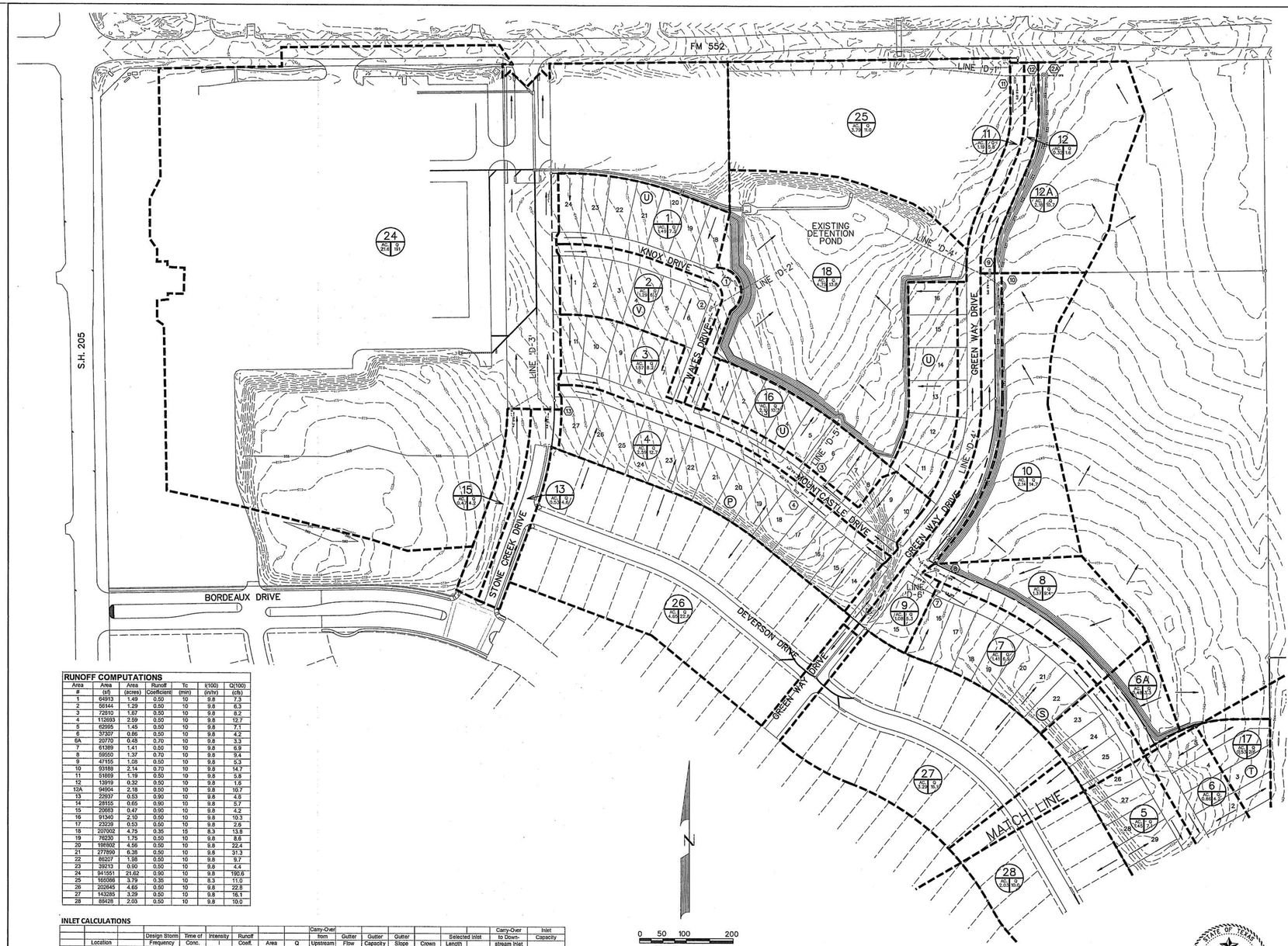
Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
SWPPP DETAILS

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 04.06

Plotted: Jun 1, 2020, 1:50 PM by user: john - Saved: 6/1/2020 by user: john
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK ELEM ENG - RECORD SET.dwg



RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN:
DATE: 06/01/2020
Glenn Engineering Corporation

LEGEND

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

RUNOFF COMPUTATIONS

Area #	Area (sf)	Area (acres)	Runoff Coefficient	Tc (min)	I(100) (in/hr)	Q(100) (cfs)
1	64913	1.49	0.50	10	9.8	7.3
2	56144	1.29	0.50	10	9.8	6.3
3	72810	1.67	0.50	10	9.8	8.2
4	112693	2.59	0.50	10	9.8	12.7
5	62995	1.45	0.50	10	9.8	7.1
6	37307	0.86	0.50	10	9.8	4.2
6A	29770	0.48	0.70	10	9.8	3.3
7	61369	1.41	0.50	10	9.8	6.9
8	59650	1.37	0.70	10	9.8	9.4
9	47155	1.08	0.50	10	9.8	5.3
10	93188	2.14	0.70	10	9.8	14.7
11	51659	1.19	0.50	10	9.8	5.8
12	13919	0.32	0.50	10	9.8	1.6
12A	94904	2.18	0.50	10	9.8	10.7
13	22937	0.53	0.90	10	9.8	4.6
14	28155	0.65	0.90	10	9.8	5.7
15	20863	0.47	0.90	10	9.8	4.2
16	91340	2.10	0.50	10	9.8	10.3
17	23239	0.53	0.50	10	9.8	2.6
18	207002	4.75	0.35	15	8.3	13.8
19	76230	1.75	0.50	10	9.8	8.6
20	198902	4.56	0.50	10	9.8	22.4
21	277899	6.38	0.50	10	9.8	31.3
22	86207	1.98	0.50	10	9.8	9.7
23	39213	0.90	0.50	10	9.8	4.4
24	941551	21.62	0.90	10	9.8	190.6
25	165086	3.79	0.35	10	8.3	11.0
26	202645	4.65	0.50	10	9.8	22.8
27	143285	3.29	0.50	10	9.8	16.1
28	88428	2.03	0.50	10	9.8	10.0

INLET CALCULATIONS

Inlet #	Location Street	Station	Design Storm Frequency (yrs.)	Time of Conc. (min.)	Intensity I (in/hr)	Runoff Coeff. "C"	Area (acres)	Q (cfs)	Carry-Over from upstream (cfs)	Gutter Flow (cfs)	Gutter Capacity (cfs)	Gutter Slope (ft/ft)	Crown Type	Selected Inlet Length (ft)	Selected Inlet Type	Carry-Over to Down-stream Inlet (cfs)	Inlet Capacity (cfs)
1	Wales/Knox	-	100	10	9.8	0.50	1.49	7.3	0.0	7.3	10.6	Low Pt	6" ptd	10	STD.	0.0	21.0
2	Wales	2+44.50	100	10	9.8	0.50	1.29	6.3	0.0	6.3	12.3	Low Pt	6" ptd	10	STD.	0.0	21.0
3	Mountcastle	6+24.10	100	10	9.8	0.50	1.67	8.2	0.0	8.2	17.7	Low Pt	6" ptd	10	STD.	0.0	21.0
4	Mountcastle	6+24.10	100	10	9.8	0.50	2.59	12.7	0.0	12.7	17.7	Low Pt	6" ptd	10	STD.	0.0	21.0
5	Mountcastle	18+21.45	100	10	9.8	0.50	1.45	7.1	0.0	7.1	16.5	1.65%	6" ptd	15	STD.	0.0	11.5
6	Mountcastle	18+36.60	100	10	9.8	0.97	1.33	7.5	0.0	7.5	21.7	2.36%	6" ptd	15	STD.	0.0	10.9
7	Mountcastle	9+91.44	100	10	9.8	0.50	1.41	6.9	0.0	6.9	19.3	1.20%	6" ptd	10	STD.	0.1	6.6
8	Mountcastle	9+69.02	100	10	9.8	0.70	1.37	9.4	0.0	9.4	21.7	2.07%	6" ptd	10	STD.	2.9	6.5
9	Greenway	16+75.00	100	10	9.8	0.50	1.08	5.3	3.0	8.3	21.1	1.90%	6" ptd	15	STD.	0.0	10.0
10	Greenway	16+47.73	100	10	9.8	0.70	2.14	14.7	0.0	14.7	N/A	Low Pt	-	4	WYE	0.0	20.5
11	Greenway	21+00.00	100	10	9.8	0.50	1.19	5.8	0.0	5.8	10.6	1.63%	6" ptd	10	STD.	0.0	6.3
12	Greenway	20+97.50	100	10	9.8	0.50	0.32	1.6	0.0	1.6	10.6	0.88%	6" ptd	10	STD.	0.0	8.3
12A	Greenway	21+10.00	100	10	9.8	0.50	2.18	10.7	0.0	10.7	N/A	Low Pt	-	4	WYE	0.0	20.5
13	Stone Creek	4+82.55	100	10	9.8	0.90	0.53	4.6	0.0	4.6	27.0	1.69%	1/4"/ft	10	STD.	0.0	5.6
14	Featherstone	39+47.97	100	10	9.8	0.90	0.65	5.7	0.0	5.7	21.9	2.10%	6" ptd	10	STD.	0.0	6.2
15	Stone Creek	4+82.55	100	10	9.8	0.90	0.47	4.2	0.0	4.2	27.0	1.69%	1/4"/ft	10	STD.	0.0	5.6

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 2015
INFORMATION PROVIDED BY CONTRACTORS (NOT FIELD VERIFIED)

The seal appearing on this document was authorized by Brandon Davidson P.E. 87682, on September 10, 2014

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

DEVELOPMENT PLANS FOR
STONE CREEK
PHASE VI
ROCKWALL, TEXAS

DRAINAGE AREA MAP
SHEET 1 OF 2

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER 13068	DATE MAY 2014	SCALE: 1"=100'	4 OF 26

FOR INFORMATION ONLY

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Stantec

Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
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GLENN ENGINEERING
T.B.P.E. FIRM REGISTRATION NO. F - 303
PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

ROCKWALL INDEPENDENT SCHOOL DISTRICT

8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02
Revision	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01
Issued	By	Appd	YYYY.MM.DD

Permit-Seal

STATE OF TEXAS — MIKE GLENN — 35059 — REGISTERED PROFESSIONAL ENGINEER

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Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
EXISTING DRAINAGE AREA MAP

Project No.	Scale
214000654	AS SHOWN
Revision	Drawing No.
8	C04.07

Plotted: Jun 1, 2020, 1:51 PM by user: john - Saved: 6/1/2020 by user: john
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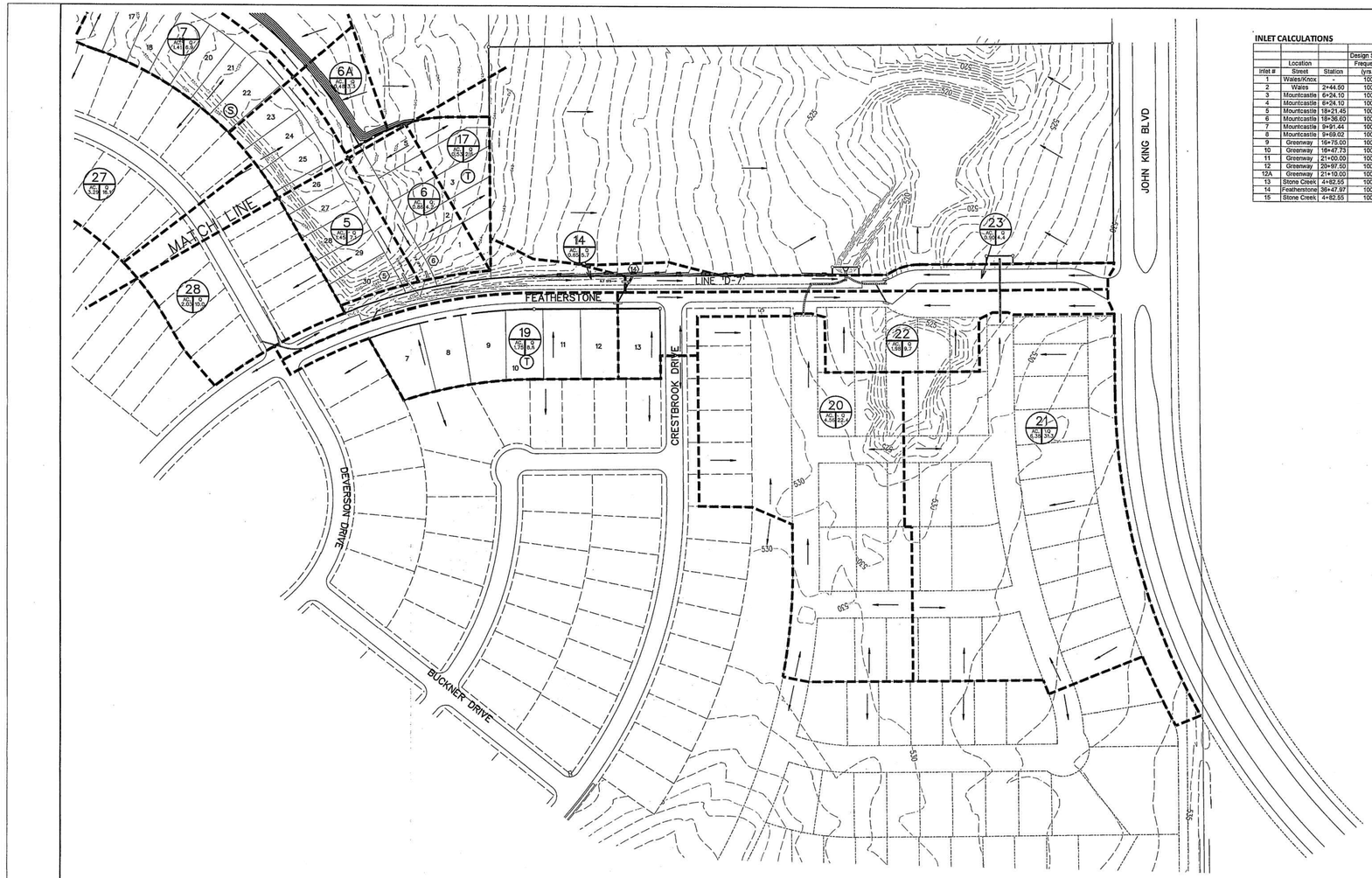
...\dgn\13068map.dgn 9/10/2014 1:42:10 PM



INLET CALCULATIONS

	Location		Design Storm Frequency	Time of Conc.	Intensity I	Runoff Coeff.	Area	Q	Carry-Over from Upstream	Gutter Flow	Gutter Capacity	Gutter Slope	Crown	Selected Inlet Length		Carry-Over to Down-stream Inlet	Inlet Capacity
Inlet #	Street	Station	(yrs.)	(min.)	(in/hr)	"C"	(acres)	(cfs)	(cfs)	(cfs)	(cfs)	(ft/ft)	Type	(ft)	Type	(cfs)	(cfs)
1	Wales/Knox	-	100	10	9.8	0.50	1.49	7.3	0.0	7.3	10.6	Low Pt	6" pbl	10	STD.	0.0	21.0
2	Wales	2+44.50	100	10	9.8	0.50	1.29	6.3	0.0	6.3	12.3	Low Pt	6" pbl	10	STD.	0.0	21.0
3	Mountcastle	6+24.10	100	10	9.8	0.50	1.67	8.2	0.0	8.2	17.7	Low Pt	6" pbl	10	STD.	0.0	21.0
4	Mountcastle	6+24.10	100	10	9.8	0.50	2.59	12.7	0.0	12.7	17.7	Low Pt	6" pbl	10	STD.	0.0	21.0
5	Mountcastle	18+21.45	100	10	9.8	0.50	1.45	7.1	0.0	7.1	16.5	1.65%	6" pbl	15	STD.	0.0	11.5
6	Mountcastle	18+36.60	100	10	9.8	0.57	1.33	7.5	0.0	7.5	21.7	2.36%	6" pbl	15	STD.	0.0	10.5
7	Mountcastle	9+91.44	100	10	9.8	0.50	1.41	6.9	0.0	6.9	19.3	1.20%	6" pbl	10	STD.	0.1	6.8
8	Mountcastle	9+59.02	100	10	9.8	0.70	1.37	9.4	0.0	9.4	21.7	2.07%	6" pbl	10	STD.	2.8	8.5
9	Greenway	16+75.00	100	10	9.8	0.50	1.08	5.3	3.0	8.3	21.1	1.96%	6" pbl	15	STD.	0.0	10.0
10	Greenway	16+67.73	100	10	9.8	0.70	2.14	14.7	0.0	14.7	N/A	Low Pt	-	4	WYE	0.0	20.5
11	Greenway	21+00.00	100	10	9.8	0.50	1.19	5.8	0.0	5.8	10.6	1.63%	6" pbl	10	STD.	0.0	6.3
12	Greenway	20+97.50	100	10	9.8	0.50	0.32	1.6	0.0	1.6	10.6	0.88%	6" pbl	10	STD.	0.0	6.3
12A	Greenway	21+10.00	100	10	9.8	0.50	2.18	10.7	0.0	10.7	N/A	Low Pt	-	4	WYE	0.0	20.5
13	Stone Creek	4+82.55	100	10	9.8	0.90	0.53	4.6	0.0	4.6	27.0	1.69%	1/4"/ft	10	STD.	0.0	5.6
14	Featherstone	38+47.97	100	10	9.8	0.90	0.65	5.7	0.0	5.7	21.9	2.10%	6" pbl	10	STD.	0.0	6.2
15	Stone Creek	4+82.55	100	10	9.8	0.90	0.47	4.2	0.0	4.2	27.0	1.69%	1/4"/ft	10	STD.	0.0	5.6

RUNOFF COMPUTATIONS

Area #	Area (sf)	Area (acres)	Runoff Coefficient	Tc (min)	I(100) (in/hr)	Q(100) (cfs)
1	64913	1.49	0.50	10	9.8	7.3
2	56144	1.29	0.50	10	9.8	6.3
3	72610	1.67	0.50	10	9.8	8.2
4	112869	2.59	0.50	10	9.8	12.7
5	62995	1.45	0.50	10	9.8	7.1
6	37307	0.86	0.50	10	9.8	4.2
6A	20770	0.48	0.70	10	9.8	3.3
7	61389	1.41	0.50	10	9.8	6.9
8	59550	1.37	0.70	10	9.8	9.4
9	47155	1.08	0.50	10	9.8	5.3
10	93188	2.14	0.70	10	9.8	14.7
11	51859	1.19	0.50	10	9.8	5.8
12	13919	0.32	0.50	10	9.8	1.6
12A	94904	2.18	0.50	10	9.8	10.7
13	22937	0.53	0.90	10	9.8	4.6
14	28155	0.65	0.90	10	9.8	5.7
15	20663	0.47	0.90	10	9.8	4.2
16	91340	2.10	0.50	10	9.8	10.3
17	23239	0.53	0.50	10	9.8	2.6
18	207002	4.75	0.35	15	8.3	13.8
19	76230	1.75	0.50	10	9.8	8.6
20	198802	4.56	0.50	10	9.8	22.4
21	277859	6.38	0.50	10	9.8	31.3
22	86207	1.98	0.50	10	9.8	9.7
23	39213	0.90	0.50	10	9.8	4.4
24	941551	21.62	0.90	10	9.8	190.6
25	165086	3.79	0.35	10	8.3	11.0
26	202645	4.65	0.50	10	9.8	22.8
27	143283	3.29	0.50	10	9.8	16.1
28	88428	2.03	0.50	10	9.8	10.0

LEGEND

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

STORM SEWER CALCULATIONS

Upstream Station	Downstream Station	Distance (ft)	AREA NO.	Total Area (Acres)	Picked Up (Acres)	C	CA	Accumulated CA	Tc (Min)	Design Storm (Years)	I (in/hr)	Q (CFS)	S (ft/ft)	Pipe Size (in)	Velocity (fps)	Head Loss (ft)	Flow Time (Min)	Time at D/S (Min)	A Velocity Head (ft)	Hydraulic Grade Upstream	Hydraulic Grade Downstream	Proposed Grade
Line D1																						
2+36.27	2+13.67	22.60	12A	2.18	2.18	0.50	1.09	1.09	10.00	100	9.80	10.7	0.0022	24	3.4	0.18	0.11	10.11	0.18		528.21	530.00
2+13.67	1+73.67	40.00	12	0.32	0.32	0.50	0.16	1.25	10.00	100	9.80	12.2	0.0029	24	3.9	0.24	0.17	10.17	0.06	528.16	528.11	530.48
1+73.67	1+56.59	17.17	11	1.19	1.19	0.50	0.60	1.84	10.00	100	9.80	18.1	0.0064	24	5.8	0.51	0.05	10.05	0.28	527.99	527.71	530.48
1+56.59																				527.60		
Line D2																						
1+39.91	0+58.72	81.19	2	1.29	1.29	0.50	0.64	0.64	10.00	100	9.80	6.3	0.0008	24	2.0	0.06	0.67	10.67	0.06	533.43	533.37	541.03
0+58.72	0+00.00	58.72	1	1.49	1.49	0.50	0.75	1.39	10.00	100	9.80	13.6	0.0036	24	4.3	0.29	0.23	10.23	0.23	533.30	533.07	540.53
0+00.00																				532.86		0.00
Line D3																						
2+10.43	1+76.19	34.24	13	0.53	0.53	0.90	0.47	0.47	10.00	100	9.80	4.6	0.0004	24	1.5	0.03	0.39	10.39	0.03	547.89	547.86	550.99
1+76.19	1+66.52	9.67	Bend	0.00	0.00	0.90	0.00	0.47	10.00	100	9.80	4.6	0.0004	24	1.5	0.03	0.11	10.11	0.00	547.85	547.85	550.60
1+66.52	0+00.00	166.52	15	0.47	0.47	0.90	0.43	0.90	10.00	100	9.80	8.8	0.0015	24	2.8	0.12	0.99	10.99	0.09	547.84	547.75	550.99
0+00.00																				547.50		
Line D4																						
10+23.08	8+81.68	141.40	26,27	7.94	7.94	0.50	3.97	3.97	10.00	100	9.80	38.9	0.0034	36	5.5	0.47	0.43	10.43	0.47	538.25	537.77	544.76
8+81.68	2+23.12	658.56	D6	2.78	2.72	0.50	1.36	5.33	10.00	100	9.80	52.2	0.0061	36	7.4	0.83	1.49	11.49	0.38	537.29	536.92	542.93
2+23.12	1+34.81	88.31	9,10	3.22	3.71	0.63	2.35	7.68	10.00	100	9.80	75.2	0.0056	42	7.8	0.95	0.19	10.19	0.10	532.88	532.77	536.81
1+34.81																				532.28		
Line D5																						
1+99.56	1+57.64	41.92	4	2.59	2.59	0.50	1.29	1.29	10.00	100	9.80	12.7	0.0031	24	4.0	0.23	0.17	10.17	0.25	2.12	1.87	540.69
1+57.64	0+64.00	153.64	3	1.67	1.67	0.50	0.83	2.13	10.00	100	9.80	20.8	0.0085	24	6.6	0.68	0.39	10.39	0.43	1.74	1.30	540.69
0+64.00																				0.00		
Line D6																						
0+83.65	0+36.55	46.50	7	1.41	1.39	0.50	0.70	0.70	10.00	100	9.80	6.8	0.0042	18	3.9	0.23	0.20	10.20	0.23	538.09	537.86	544.06
0+36.55	0+00.00	36.55	8	1.37	1.33	0.50	0.67	1.36	10.00	100	9.80	13.3	0.0035	24	4.2	0.28	0.14	10.14	0.05	537.66	537.61	543.52
0+00.00															7.4	0.85			0.57	537.48	536.92	
Line D7																						
8+79.17	7+97.99	81.18	28	2.03	2.03	0.50	1.02	1.02	10.00	100	9.80	10.0	0.0090	18	5.6	0.49	0.24	10.24	0.49	535.12	534.62	542.25
7+97.99	4+12.32	385.67	5,6,6A	2.78	2.78	0.53	1.49	2.50	10.00	100	9.80	24.6	0.0118	24	7.8	0.95	0.82	10.82	0.46	533.89	533.43	541.15
4+12.32	0+66.24	346.08	14,19	2.40	2.40	0.61	1.46	3.96	10.00	100	9.80	38.9	0.0090	30	7.9	0.97	0.73	10.73	0.02	528.86	528.84	532.94
0+66.24	0+00.00	66.24	Future	4.56	4.56	0.50	2.28	6.24	10.00	100	9.80	61.3	0.0037	42	6.4	0.63	0.17	10.17	-0.17	525.73	525.25	528.16
0+00.00																				525.00		

BENCHMARK:

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

N

0 50 100 200
SCALE: 1" = 100'

AS-BUILT SEPTEMBER 2015
INFORMATION PROVIDED BY CONTRACTORS (NOT FIELD VERIFIED)

STATE OF TEXAS — BRANDON DAVIDSON — 87682 — REGISTERED PROFESSIONAL ENGINEER — 9/10/14

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

DEVELOPMENT PLANS FOR
STONE CREEK
PHASE VI
ROCKWALL, TEXAS

DRAINAGE AREA MAP
SHEET 2 OF 2

DRAWN BY	DESIGNED BY	CHECKED BY	SHEET NO.
JOB NUMBER 13088	DATE MAY 2014	SCALE: 1"=100'	5 OF 26

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN: Chrislyn Armijo
DATE: 06/01/2020
Glenn Engineering Corporation

FOR INFORMATION ONLY

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Plotted: Jun 1, 2020, 1:51 PM by user: john - Saved: 6/1/2020 by user: john
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK ELEM ENG - RECORD SET.dwg
...\dgn\13088map2.dgn 9/10/2014 1:42:35 PM

Stantec
Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
Tel: (214) 473-2400 / Fax: (214) 473-2401
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Consultants

GLENN ENGINEERING
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PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02

Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal
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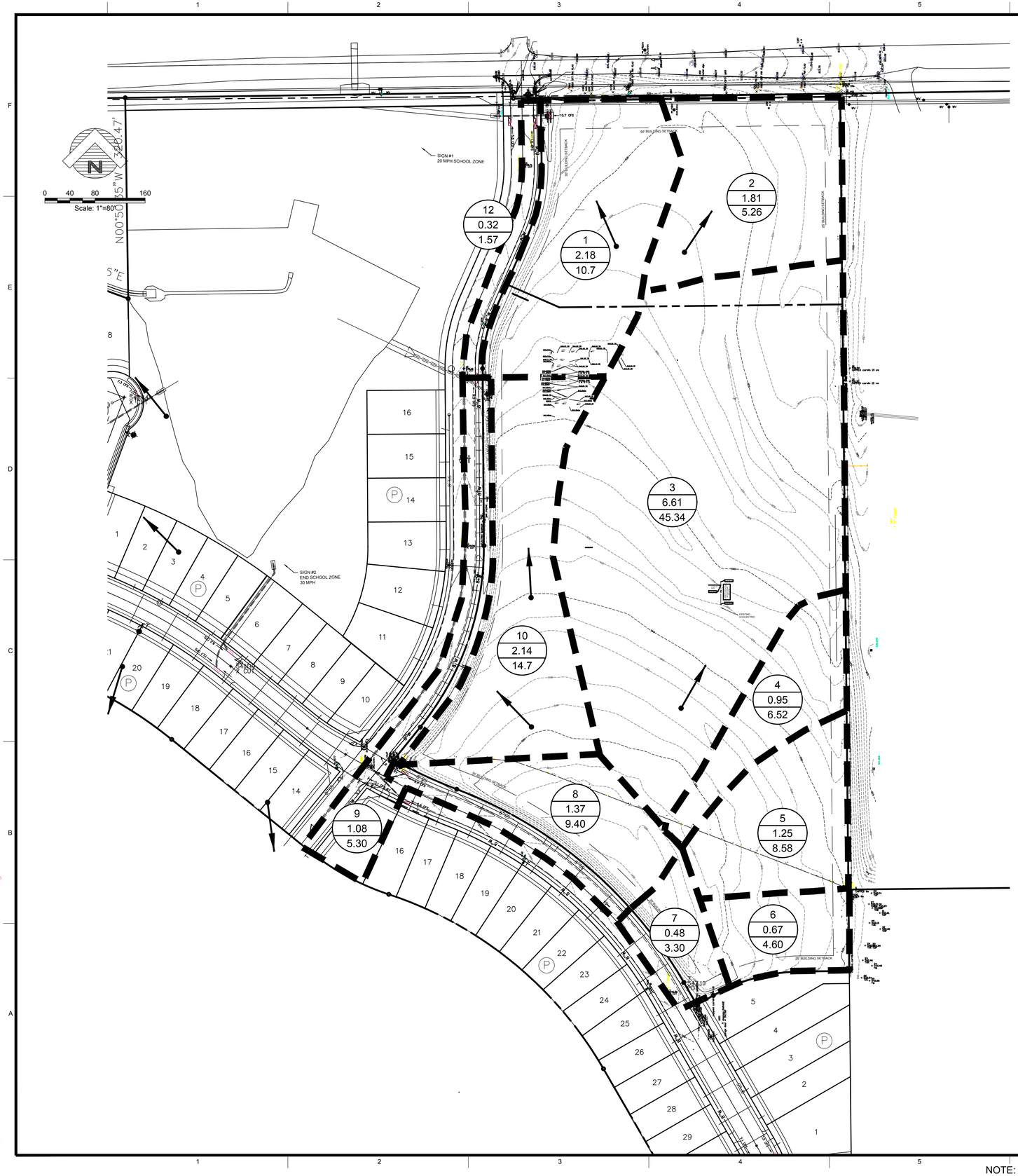
Client/Project
Rockwall ISD
Elementary School #15
2911 Greenway Drive
Rockwall, TX 75087

Title
EXISTING DRAINAGE AREA MAP

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C04.08



RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.

SIGN: Chevalyn Armijo

DATE: 06/01/2020

Glenn Engineering Corporation

DRAINAGE CALCULATIONS

AREA NO.	DRAINAGE AREA (Acres)	TIME OF CONCENTRATION (min.)	RUNOFF COEFFICIENT	INTENSITY (in./hr.) (I100)	DESIGN FLOW (Q100)	COMMENTS
1	2.18	10	0.50	9.80	10.68	NORTHWEST TO EXISTING INLET
2	1.81	20	0.35	8.30	5.26	SURFACE TO NORTHEAST
3	6.61	10	0.70	9.80	45.34	EAST TO EX. INLET
4	0.95	10	0.70	9.80	6.52	EAST TO EX. INLET
5	1.25	10	0.70	9.80	8.58	EAST TO EX. INLET
6	0.67	10	0.70	9.80	4.60	SURFACE TO EAST
7	0.48	10	0.70	9.80	3.29	SOUTH TO MOUNTCASTLE
8	1.37	10	0.70	9.80	9.40	SOUTHWEST TO MOUNTCASTLE
9	1.08	10	0.50	9.80	5.29	TO GREENWAY DRIVE
10	2.14	10	0.70	9.80	14.68	EX. GREENWAY INLET/CULVERT
12	0.32	10	0.50	9.80	1.57	EX. GREENWAY INLET/CULVERT
	SUM OF ALL AREAS				SUM OF ALL AREAS	
	18.86				115.20	

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Stantec

Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
Tel: (214) 473-2400 / Fax: (214) 473-2401
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Consultants

GLENN ENGINEERING
T.B.P.E. FIRM REGISTRATION NO. F - 303
PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
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2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02

Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project

Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title **EXISTING DRAINAGE AREA MAP - ON-SITE**

Project No. 214000654

Scale AS SHOWN

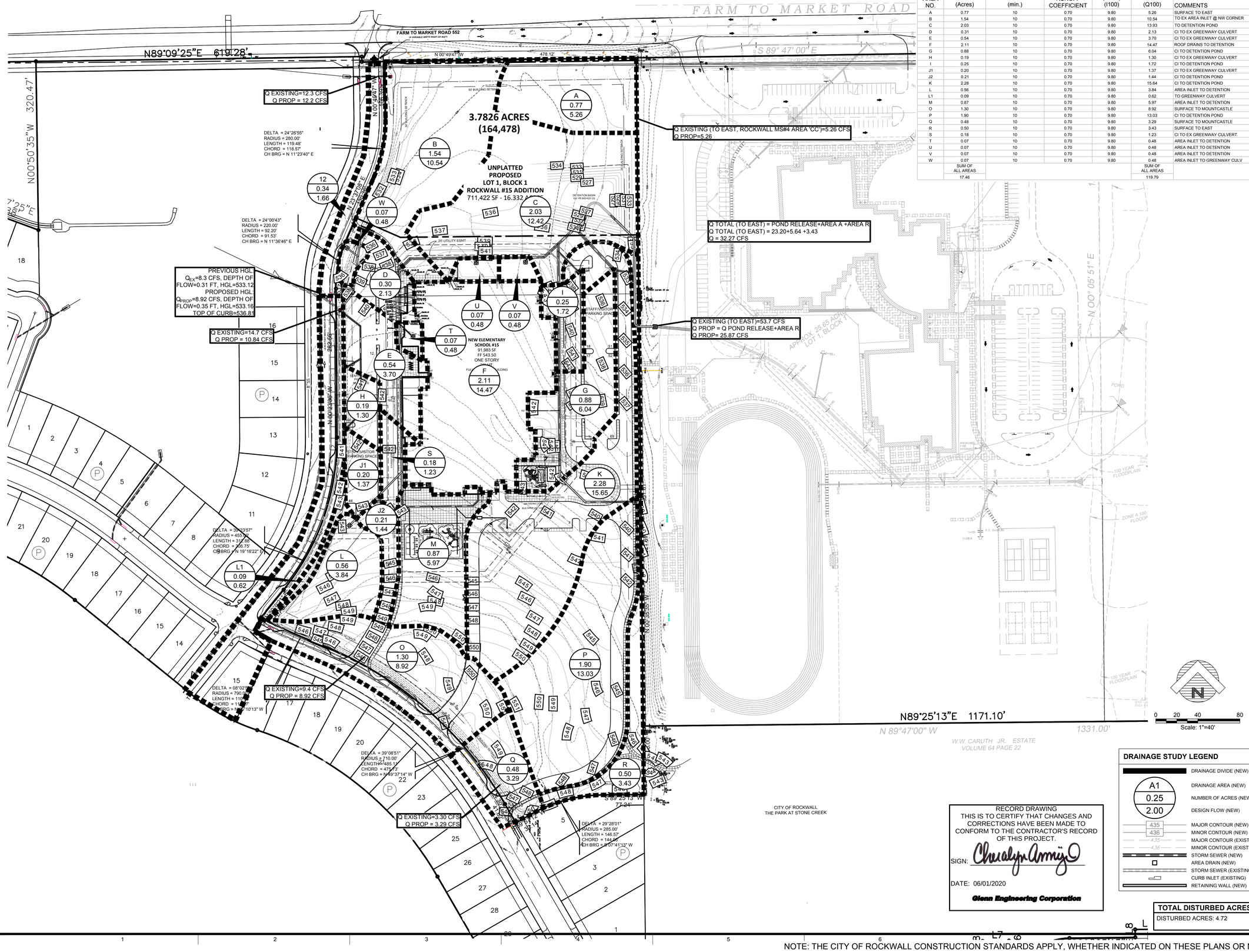
Revision 8

Drawing No. C 04.09

Plotted: Jun 1, 2020, 1:52 PM by user: john - Saved: 6/1/2020 by user: john
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK ELEM ENG - RECORD SET.dwg

DRAINAGE CALCULATIONS

AREA NO.	DRAINAGE AREA (Acres)	TIME OF CONCENTRATION (min.)	RUNOFF COEFFICIENT	INTENSITY (in./hr.) (I100)	DESIGN FLOW (Q100)	COMMENTS
A	0.77	10	0.70	9.80	5.26	SURFACE TO EAST
B	1.54	10	0.70	9.80	10.54	TO EX AREA INLET @ NW CORNER
C	2.03	10	0.70	9.80	13.93	TO DETENTION POND
D	0.31	10	0.70	9.80	2.13	CI TO EX GREENWAY CULVERT
E	0.54	10	0.70	9.80	3.70	CI TO EX GREENWAY CULVERT
F	2.11	10	0.70	9.80	14.47	ROOF DRAINS TO DETENTION
G	0.88	10	0.70	9.80	6.04	CI TO DETENTION POND
H	0.19	10	0.70	9.80	1.30	CI TO EX GREENWAY CULVERT
I	0.25	10	0.70	9.80	1.72	CI TO DETENTION POND
J1	0.20	10	0.70	9.80	1.37	CI TO EX GREENWAY CULVERT
J2	0.21	10	0.70	9.80	1.44	CI TO DETENTION POND
K	2.28	10	0.70	9.80	15.64	CI TO DETENTION POND
L	0.56	10	0.70	9.80	3.84	AREA INLET TO DETENTION
L1	0.09	10	0.70	9.80	0.62	TO GREENWAY CULVERT
M	0.87	10	0.70	9.80	5.97	AREA INLET TO DETENTION
O	1.30	10	0.70	9.80	8.92	SURFACE TO MOUNTCASTLE
P	1.90	10	0.70	9.80	13.03	CI TO DETENTION POND
Q	0.48	10	0.70	9.80	3.29	SURFACE TO MOUNTCASTLE
R	0.50	10	0.70	9.80	3.43	SURFACE TO EAST
S	0.18	10	0.70	9.80	1.23	CI TO EX GREENWAY CULVERT
T	0.07	10	0.70	9.80	0.48	AREA INLET TO DETENTION
U	0.07	10	0.70	9.80	0.48	AREA INLET TO DETENTION
V	0.07	10	0.70	9.80	0.48	AREA INLET TO DETENTION
W	0.07	10	0.70	9.80	0.48	AREA INLET TO GREENWAY CULV
	SUM OF ALL AREAS				SUM OF ALL AREAS	
	17.46				119.79	



DRAINAGE STUDY LEGEND

- DRAINAGE DIVIDE (NEW)
- A1 / 0.25 / 2.00 — DRAINAGE AREA (NEW); NUMBER OF ACRES (NEW); DESIGN FLOW (NEW)
- 435 — MAJOR CONTOUR (NEW)
- 436 — MINOR CONTOUR (NEW)
- 435 — MAJOR CONTOUR (EXISTING)
- 436 — MINOR CONTOUR (EXISTING)
- STORM SEWER (NEW)
- AREA DRAIN (NEW)
- STORM SEWER (EXISTING)
- CURB INLET (EXISTING)
- RETAINING WALL (NEW)

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN: Chrisalyn Armijo
DATE: 06/01/2020
Glenn Engineering Corporation

TOTAL DISTURBED ACRES
DISTURBED ACRES: 4.72

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

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Issued

Permit-Seal

STATE OF TEXAS
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The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
PROPOSED DRAINAGE AREA MAP

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 04.10

Plotted: Jun 1, 2020, 1:53 PM by user: john - Saved: 6/1/2020 by user: john
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Detention Calculations 100yr

Present Conditions
Q=CIA

A =	11.17
C =	0.35
Tc =	20
I_{100} =	8.3
Q_{100} =	32.44885

Site Conditions (Developed) To EX_INLET

A =	11.3
C =	0.7
Tc =	10
I_{100} =	9.8
Q_{100} =	77.52

ALLOWABLE RELEASE TO EXISTING SYSTEM = 37.3 CFS

Flow for Storm Durations (Developed)

Time	I	C	Q
10 min	9.80	0.7	77.5180
15 min	9.00	0.7	71.1900
20 min	8.30	0.7	65.6530
30 min	6.90	0.7	54.5790
40 min	5.80	0.7	45.8780
50 min	5.00	0.7	39.5500
60 min	4.50	0.7	35.5950
70 min	4.00	0.7	31.6400
80 min	3.70	0.7	29.2670
90 min	3.50	0.7	27.6850
100 min	3.40	0.7	26.8940
110 min	3.20	0.7	25.3120

Storage Calculations

10 min				
Inflow	46510.8	Storage	27041.49	
Outflow	19469.31			
15 min				
Inflow	64071	Storage	39734.36	
Outflow	24336.638			
20 min				
Inflow	78783.6	Storage	49579.64	
Outflow	29203.965			
30 min				
Inflow	98242.2	Storage	59303.58	
Outflow	38938.62			
40 min				
Inflow	110107.2	Storage	61433.93	*
Outflow	48673.275			
50 min				
Inflow	118650	Storage	60242.07	
Outflow	58407.93			
60 min				
Inflow	128142	Storage	59999.42	
Outflow	68142.585			
70 min				
Inflow	132888	Storage	55010.76	
Outflow	77877.24			
80 min				
Inflow	140481.6	Storage	52869.71	
Outflow	87611.895			
90 min				
Inflow	149499	Storage	52152.45	
Outflow	97346.55			
100 min				
Inflow	145227.6	Storage	38146.40	
Outflow	107081.21			
110 min				
Inflow	136684.8	Storage	19868.94	
Outflow	116815.86			

Required Storage = 61433.93 cfs
Provided Storage = 81878 cf

Detention Calculations 50yr

Present Conditions
Q=CIA

A =	11.17
C =	0.35
Tc =	20
I_{50} =	7.50
Q_{50} =	29.32125

Site Conditions (Developed) To EX_INLET

A =	11.3
C =	0.7
Tc =	10
I_{50} =	9
Q_{50} =	71.19

ALLOWABLE RELEASE TO EXISTING SYSTEM = 29.32 CFS

Flow for Storm Durations (Developed)

Time	I	C	Q
10 min	9.00	0.7	71.1900
15 min	8.10	0.7	64.0710
20 min	7.50	0.7	59.3250
30 min	6.10	0.7	48.2510
40 min	5.20	0.7	41.1320
50 min	4.50	0.7	35.5950
60 min	3.90	0.7	30.8490
70 min	3.70	0.7	29.2670
80 min	3.50	0.7	27.6850
90 min	3.30	0.7	26.1030
100 min	3.00	0.7	23.7300
110 min	2.90	0.7	22.9390

Storage Calculations

10 min				
Inflow	42714	Storage	25121.25	
Outflow	17592.75			
15 min				
Inflow	57663.9	Storage	35672.96	
Outflow	21990.94			
20 min				
Inflow	71190	Storage	44800.88	
Outflow	26389.13			
30 min				
Inflow	86851.8	Storage	51666.30	
Outflow	35185.5			
40 min				
Inflow	98716.8	Storage	54734.93	*
Outflow	43981.88			
50 min				
Inflow	106785	Storage	54006.75	
Outflow	52778.25			
60 min				
Inflow	111056.4	Storage	49481.78	
Outflow	61574.63			
70 min				
Inflow	122921.4	Storage	52550.40	
Outflow	70371			
80 min				
Inflow	132888	Storage	53720.63	
Outflow	79167.38			
90 min				
Inflow	140956.2	Storage	52992.45	
Outflow	87963.75			
100 min				
Inflow	128142	Storage	31381.88	
Outflow	96760.13			
110 min				
Inflow	123870.6	Storage	18314.10	
Outflow	105556.5			

Required Storage = 54734.93 cfs
Provided Storage = 81878 cf

Detention Calculations 25yr

Present Conditions
Q=CIA

A =	11.17
C =	0.35
Tc =	20
I_{25} =	6.6
Q_{25} =	25.8027

Site Conditions (Developed) To EX_INLET

A =	11.3
C =	0.7
Tc =	10
I_{25} =	6.6
Q_{25} =	52.21

ALLOWABLE RELEASE TO EXISTING SYSTEM = 25.80 CFS

Flow for Storm Durations (Developed)

Time	I	C	Q
10 min	8.30	0.7	65.6530
15 min	7.50	0.7	59.3250
20 min	6.60	0.7	52.2060
30 min	5.50	0.7	43.5050
40 min	4.60	0.7	36.3860
50 min	4.00	0.7	31.6400
60 min	3.50	0.7	27.6850
70 min	3.30	0.7	26.1030
80 min	3.10	0.7	24.5210
90 min	2.90	0.7	22.9390
100 min	2.70	0.7	21.3570
110 min	2.50	0.7	19.7750

Storage Calculations

10 min				
Inflow	39391.8	Storage	23910.18	
Outflow	15481.62			
15 min				
Inflow	53392.5	Storage	34040.48	
Outflow	19352.03			
20 min				
Inflow	62647.2	Storage	39424.77	
Outflow	23222.43			
30 min				
Inflow	78309	Storage	47345.76	
Outflow	30963.24			
40 min				
Inflow	87326.4	Storage	48622.35	*
Outflow	38704.05			
50 min				
Inflow	94920	Storage	48475.14	
Outflow	46444.86			
60 min				
Inflow	99666	Storage	45480.33	
Outflow	54185.67			
70 min				
Inflow	109632.6	Storage	47706.12	
Outflow	61926.48			
80 min				
Inflow	117700.8	Storage	48033.51	
Outflow	69667.29			
90 min				
Inflow	123870.6	Storage	46462.50	
Outflow	77408.1			
100 min				
Inflow	115327.8	Storage	30178.89	
Outflow	85148.91			
110 min				
Inflow	106785	Storage	13895.28	
Outflow	92889.72			

Required Storage = 48622.35 cfs
Provided Storage = 81878 cf

Detention Calculations 10YR

Present Conditions
Q=CIA

A =	11.17
C =	0.35
Tc =	10
I_{10} =	5.9
Q_{10} =	23.06605

Site Conditions (Developed) To EX_INLET

A =	11.3
C =	0.7
Tc =	10
I_{10} =	5.9
Q_{10} =	46.67

ALLOWABLE RELEASE TO EXISTING SYSTEM = 23.07 CFS

Flow for Storm Durations (Developed)

Time	I	C	Q
10 min	7.10	0.7	56.1610
15 min	6.50	0.7	51.4150
20 min	5.90	0.7	46.6690
30 min	4.60	0.7	36.3860
40 min	4.00	0.7	31.6400
50 min	3.50	0.7	27.6850
60 min	3.00	0.7	23.7300
70 min	2.80	0.7	22.1480
80 min	2.60	0.7	20.5660
90 min	2.50	0.7	19.7750
100 min	2.40	0.7	18.9840
110 min	2.30	0.7	18.1930

Storage Calculations

10 min				
Inflow	33696.6	Storage	19856.97	
Outflow	13839.63			
15 min				
Inflow	46273.5	Storage	28973.96	
Outflow	17299.54			
20 min				
Inflow	56002.8	Storage	35243.36	
Outflow	20759.45			
30 min				
Inflow	65494.8	Storage	37815.54	
Outflow	27679.26			
40 min				
Inflow	75936	Storage	41336.93	
Outflow	34599.08			
50 min				
Inflow	83055	Storage	41536.11	*
Outflow	41518.89			
60 min				
Inflow	85428	Storage	36989.30	
Outflow	48438.71			
70 min				
Inflow	93021.6	Storage	37663.08	
Outflow	55358.52			
80 min				
Inflow	98716.8	Storage	36438.47	
Outflow	62278.34			
90 min				
Inflow	106785	Storage	37586.85	
Outflow	69198.15			
100 min				
Inflow	102513.6	Storage	26395.64	
Outflow	76117.97			
110 min				
Inflow	98242.2	Storage	15204.42	
Outflow	83037.78			

Required Storage = 41536.11 cfs
Provided Storage = 81878 cf

Detention Calculations 5YR

Present Conditions
Q=CIA

A =	11.17
C =	0.35
Tc =	10
I_5 =	4.9
Q_5 =	19.15655

Site Conditions (Developed) To EX_INLET

A =	11.3
C =	0.7
Tc =	10
I_5 =	6.1
Q_5 =	48.25

ALLOWABLE RELEASE TO EXISTING SYSTEM = 19.16 CFS

Flow for Storm Durations (Developed)

Time	I	C	Q
10 min	6.10	0.7	48.2510
15 min	5.50	0.7	43.5050
20 min	4.90	0.7	38.7590
30 min	4.10	0.7	32.4310
40 min	3.40	0.7	26.8940
50 min	2.80	0.7	22.1480
60 min	2.60	0.7	20.5660
70 min	2.40	0.7	18.9840
80 min	2.30	0.7	18.1930
90 min	2.10	0.7	16.6110
100 min	1.90	0.7	15.0290
110 min	1.80	0.7	14.2380

Storage Calculations

10 min				
Inflow	28950.6	Storage	17456.67	
Outflow	11493.93			
15 min				
Inflow	39154.5	Storage	24787.09	
Outflow	14367.41			
20 min				
Inflow	46510.8	Storage	29269.91	
Outflow	17240.9			
30 min				
Inflow	58375.8	Storage	35387.94	
Outflow	22987.86			
40 min				
Inflow	64545.6	Storage	35810.78	*
Outflow	28734.83			
50 min				
Inflow	66444	Storage	31962.21	
Outflow	34481.79			
60 min				
Inflow	74037.6	Storage	33808.85	
Outflow	40228.76			
70 min				
Inflow	79732.8	Storage	33757.08	
Outflow	45975.72			
80 min				
Inflow	87326.4	Storage	35603.72	
Outflow	51722.69			
90 min				
Inflow	89699.4	Storage	32229.75	
Outflow	57469.65			
100 min				
Inflow	81156.6	Storage	17939.99	
Outflow	63216.62			
110 min				
Inflow	76885.2	Storage	7921.62	
Outflow	68963.58			

Storage = **35810.78** cfs
Storage = **81878 cf**

OUTLET DEVICE = 24" Dia. Pipe - F.L. ELEV. 526.00

Q actual INTO POND	Q actual OUT OF POND	Q allow OUT OF POND	STORAGE USED	MAX. W.S. ELEVATION
Q_5= 47.70 cfs	Q_5=17.44 cfs	19.15 cfs	22,208 c.f.	529.29 w.s.
Q_{10}=55.51 cfs	Q_{10}=18.70 cfs	23.07 cfs	26,315 c.f.	529.63 w.s.
Q_{25}=64.90 cfs	Q_{25}=20.28 cfs	25.81 cfs	32,084 c.f.	530.09 w.s.
Q_{50}=70.37 cfs	Q_{50}=21.44 cfs	29.32 cfs	37,341 c.f.	530.45 w.s.
Q_{100}=76.63 cfs	Q_{100}=23.20 cfs	32.45 cfs	45,991 c.f.	531.03 w.s.

PROPOSED CONDITIONS WITH STORM DETENTION
MAXIMUM VOLUME REQUIRED IS 60,167.21 CF AT THE 40 MIN. STORM DURATION
MAXIMUM VOLUME PROVIDED IS 84,230 CF

AREAS TO DETENTION POND
C,F,G,I,J2,K,L,M,P,T,U,V=11.30 ACRES
AREAS TO EAST
AREAS A & R FOR THIS SITE ARE ACCOUNTED FOR IN ORIGINAL DESIGN OF ROCKWALL MS#4 AS AREAS CC, Z, & AA AND DO NOT EXCEED ORIGINAL DESIGN CAPACITY
AREA A=5.64 CFS<AREA CC=7.40
AREA R=3.43 CFS<AREA Z&AA=6.32 CFS

EXISTING CAPACITY PER DOWNSTREAM DESIGN CAPACITY (ROCKWALL MS#4 AREA 'Y')=37.3CFS
ALLOWABLE REALEASE PER EXISTING CONDITION Q EX. = 32.45

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN: Chrisalyn Armijo
DATE: 06/01/2020
Glenn Engineering Corporation

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Plotted: Jun 1, 2020, 1:53 PM by user: john - Saved: 6/1/2020 by user: john
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MIKE GLENN
35059
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The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
PROPOSED DRAINAGE CALCULATIONS

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 04.11

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2019.2 — Monday, 04 / 29 / 2019

Pond No. 1 - <New Pond>

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 526.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	526.00	10	0	0
1.00	527.00	5,381	1,874	1,874
2.00	528.00	8,776	7,009	8,883
3.00	529.00	10,960	9,847	18,730
4.00	530.00	13,348	12,133	30,863
5.00	531.00	15,939	14,623	45,486
6.00	532.00	18,734	17,316	62,802
7.00	533.00	21,732	20,212	83,015

Culvert / Orifice Structures

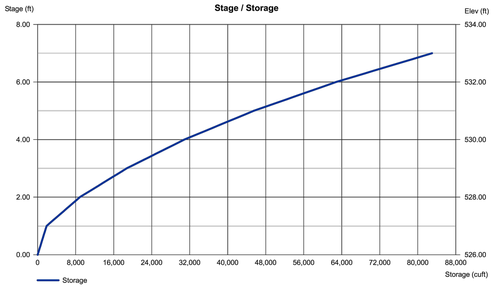
	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	0.00	0.00	0.00
Span (in)	= 24.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 526.00	0.00	0.00	0.00
Length (ft)	= 262.06	0.00	0.00	0.00
Slope (%)	= 0.37	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)
TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2019.2 — Monday, 04 / 29 / 2019

Pond No. 1 - <New Pond>

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 526.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	526.00	10	0	0
1.00	527.00	5,381	1,874	1,874
2.00	528.00	8,776	7,009	8,883
3.00	529.00	10,960	9,847	18,730
4.00	530.00	13,348	12,133	30,863
5.00	531.00	15,939	14,623	45,486
6.00	532.00	18,734	17,316	62,802
7.00	533.00	21,732	20,212	83,015

Culvert / Orifice Structures

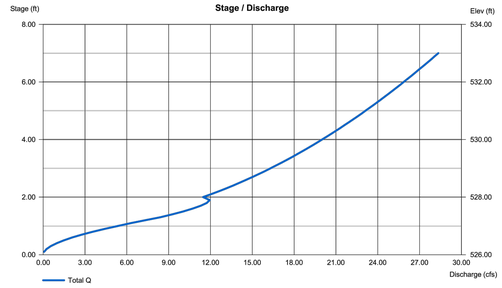
	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	0.00	0.00	0.00
Span (in)	= 24.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 526.00	0.00	0.00	0.00
Length (ft)	= 262.06	0.00	0.00	0.00
Slope (%)	= 0.37	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)
TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Hydrograph Report

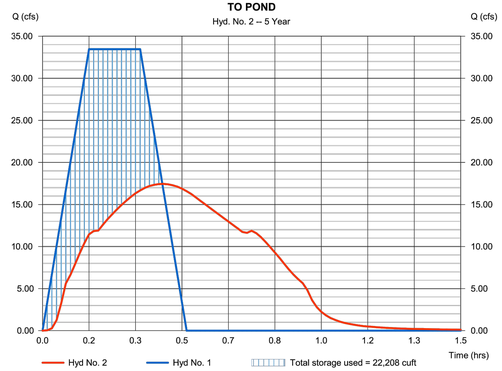
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2019.2 — Monday, 04 / 29 / 2019

Hyd. No. 2

TO POND

Hydrograph type	= Reservoir	Peak discharge	= 17.44 cfs
Storm frequency	= 5 yrs	Time to peak	= 0.43 hrs
Time interval	= 1 min	Hyd. volume	= 42,163 cuft
Inflow hyd. No.	= 1 - into pond	Max. Elevation	= 529.29 ft
Reservoir name	= <New Pond>	Max. Storage	= 22,208 cuft

Storage Indication method used.



Hydrograph Report

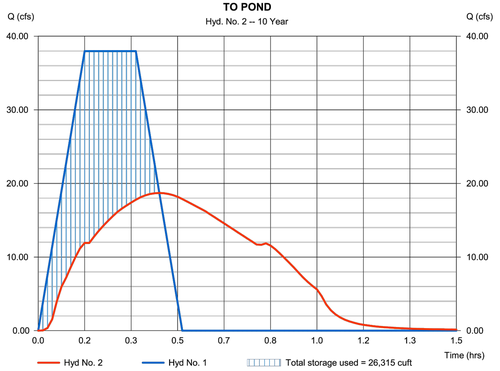
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2019.2 — Monday, 04 / 29 / 2019

Hyd. No. 2

TO POND

Hydrograph type	= Reservoir	Peak discharge	= 18.70 cfs
Storm frequency	= 10 yrs	Time to peak	= 0.43 hrs
Time interval	= 1 min	Hyd. volume	= 47,856 cuft
Inflow hyd. No.	= 1 - into pond	Max. Elevation	= 529.63 ft
Reservoir name	= <New Pond>	Max. Storage	= 26,315 cuft

Storage Indication method used.



Hydrograph Report

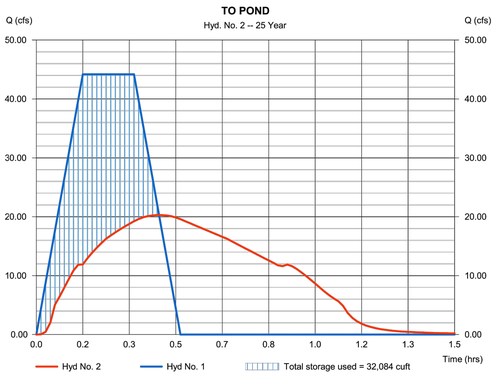
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2019.2 — Monday, 04 / 29 / 2019

Hyd. No. 2

TO POND

Hydrograph type	= Reservoir	Peak discharge	= 20.28 cfs
Storm frequency	= 25 yrs	Time to peak	= 0.43 hrs
Time interval	= 1 min	Hyd. volume	= 55,666 cuft
Inflow hyd. No.	= 1 - into pond	Max. Elevation	= 530.09 ft
Reservoir name	= <New Pond>	Max. Storage	= 32,084 cuft

Storage Indication method used.



Hydrograph Report

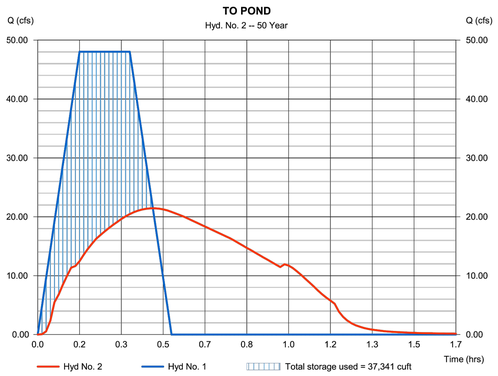
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2019.2 — Monday, 04 / 29 / 2019

Hyd. No. 2

TO POND

Hydrograph type	= Reservoir	Peak discharge	= 21.44 cfs
Storm frequency	= 50 yrs	Time to peak	= 0.47 hrs
Time interval	= 1 min	Hyd. volume	= 63,400 cuft
Inflow hyd. No.	= 1 - into pond	Max. Elevation	= 530.45 ft
Reservoir name	= <New Pond>	Max. Storage	= 37,341 cuft

Storage Indication method used.



Hydrograph Report

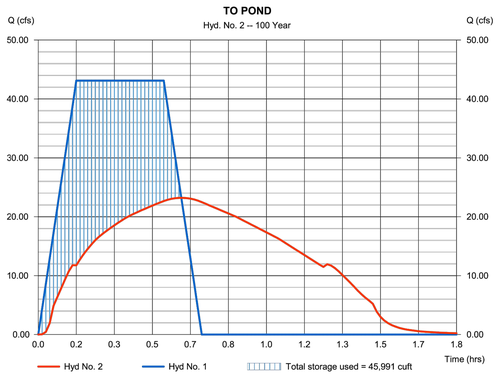
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® 2019 by Autodesk, Inc. v2019.2 — Monday, 04 / 29 / 2019

Hyd. No. 2

TO POND

Hydrograph type	= Reservoir	Peak discharge	= 23.20 cfs
Storm frequency	= 100 yrs	Time to peak	= 0.63 hrs
Time interval	= 1 min	Hyd. volume	= 85,346 cuft
Inflow hyd. No.	= 1 - into pond	Max. Elevation	= 531.03 ft
Reservoir name	= <New Pond>	Max. Storage	= 45,991 cuft

Storage Indication method used.



RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.

SIGN: Chrealyn Armijo

DATE: 06/01/2020

Glenn Engineering Corporation

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Stantec

Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
Tel: (214) 473-2400 / Fax: (214) 473-2401
www.stantec.com

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Consultants

GLENN ENGINEERING
T.B.P.E. FIRM REGISTRATION NO. F - 303
PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02

Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project

Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title: PROPOSED DRAINAGE CALCULATIONS

Project No. 214000654

Scale AS SHOWN

Revision 8

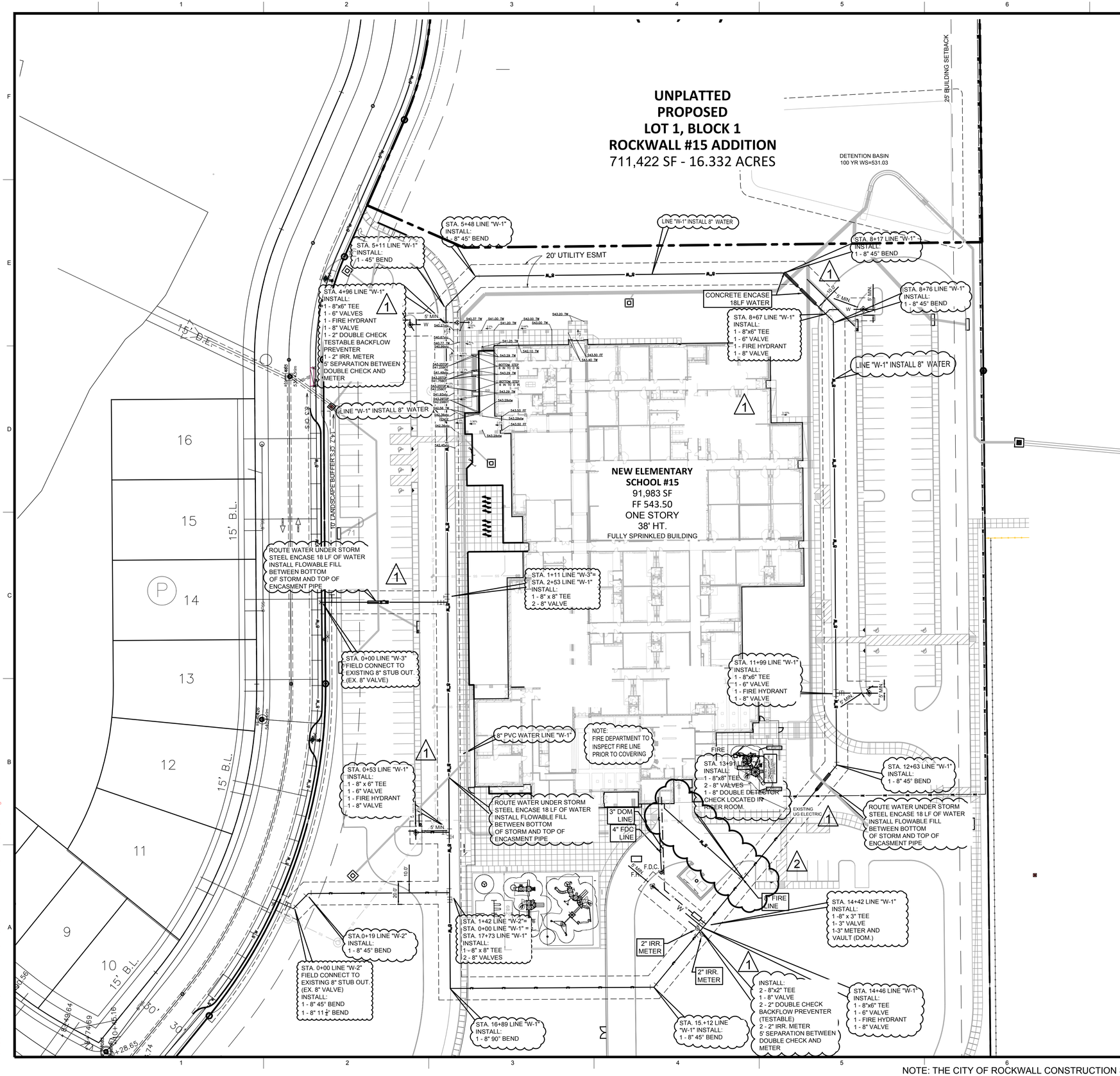
Drawing No. C 04.12

Plotted: Jun 1, 2020, 1:53 PM by user: john - Saved: 6/1/2020 by user: john
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK ELEM ENG - RECORD SET.dwg

			Drainage Area						Time of Concentra				5 yr	100 yr	Q5	Q100			Design Conduit							HGL		Velocity		Headloss Calculations						Invert Elev			
			Incremental																																			
TO	FROM	PIPE LENGTH	Drainage Area	Drainage Area	Total Drainage Area "A"	Runoff Coefficient "C"	Incremental "CA"	Total "CA"	Inlet Time	Travel Time in Conduit	Total	Rainfall Intensity "I"	Rainfall Intensity "I"	Total Runoff "Q" w/o Bypass Inlows	Total Runoff "Q" w/o Bypass Inlows	Inlet Bypass	Q pipe	No. Of Conduits	Span (Box Culvert)	Pipe Diameter (Culvert Rise)	Slope of Conduit	Flow Depth in Conduit	n	Friction Slope "Sf"	Downstream HGL Elevation	Upstream HGL Elevation	Downstream Velocity (V_d) out	Upstream Velocity (V_u) in	Downstream Velocity Head $V_d^2/2g$	Upstream Velocity Head $V_u^2/2g$	Minor Loss Coefficient K	$kV_u^2/2g$	Hk	Design HGL	Upstream Pipe Flowline	Downstream Pipe Flowline	Upstream Ground Elev (Top of Curb)	Comments
			No.	acres					min	min	min	in/hr	in/hr	cfs	cfs	cfs	cfs		ft	in (ft)	ft/ft	ft		ft/ft	elev	elev	ft/sec	ft/sec	ft	ft		ft	ft	ft	ft	ft	ft	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19					20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
STORM DRAIN LINE A																																						
1+56.16	0+87.62	68.5	D	0.29	0.29	0.70	0.20	0.20	N/A	N/A	N/A	N/A	9.80	1.99	N/A	0.0	1.99	1	0.0	18	0.0067	1.50	0.013	0.0004	531.24	531.27	1.13	0.00	0.02	0.00	1.50	0.00	0.02	531.29	530.41	529.95	534.41	10' CURB INLET
0+87.62	0+39.81	47.8	W	0.09	0.38	0.70	0.06	0.27	N/A	N/A	N/A	N/A	9.80	2.61	N/A	0.0	2.61	1	0.0	18	0.0067	1.50	0.013	0.0006	531.19	531.22	1.48	1.13	0.03	0.02	0.60	0.01	0.02	531.24	529.95	529.64	537.21	LAT A2
0+39.81	0+35.10	4.7	E	0.54	0.92	0.70	0.38	0.64	N/A	N/A	N/A	N/A	9.80	6.31	N/A	0.0	6.31	1	0.0	18	0.0067	1.50	0.013	0.0036	531.00	531.01	3.57	1.48	0.20	0.03	0.60	0.02	0.18	531.19	529.64	529.60	538.00	LAT A1
0+35.10	0+00.00	35.1	N/A	N/A	0.92	0.70	0.00	0.64	N/A	N/A	N/A	N/A	9.80	6.31	N/A	0.0	6.31	1	0.0	18	0.0067	1.50	0.013	0.0036	530.87	531.00	0.00	3.57	0.00	0.20	0.35	0.07	0.00	531.00	529.60	529.37	538.00	45° BEND
Notes:																																						
STORM DRAIN LINE B																																						
2+57.35	2+12.10	45.3	J1	0.20	0.20	0.70	0.14	0.14	N/A	N/A	N/A	N/A	9.80	1.37	N/A	0.0	1.37	1	0.0	18	0.0316	1.50	0.013	0.0002	531.17	531.17	0.78	0.00	0.01	0.00	1.50	0.00	0.01	531.18	537.50	536.07	541.50	10' CURB INLET
2+12.10	1+90.22	21.9	N/A	N/A	0.20	0.70	0.00	0.14	N/A	N/A	N/A	N/A	9.80	1.37	N/A	0.0	1.37	1	0.0	18	0.0316	1.50	0.013	0.0002	531.16	531.16	0.78	0.78	0.01	0.01	0.35	0.00	0.01	531.17	536.07	535.38	541.21	45° BEND
1+90.22	1+09.27	81.0	S	0.18	0.38	0.70	0.13	0.27	N/A	N/A	N/A	N/A	9.80	2.61	N/A	0.0	2.61	1	0.0	18	0.0316	1.50	0.013	0.0006	531.08	531.13	1.48	0.78	0.03	0.01	0.60	0.01	0.03	531.16	535.38	532.82	541.11	LAT B2
1+09.27	0+46.85	62.4	H	0.19	0.57	0.70	0.13	0.40	N/A	N/A	N/A	N/A	9.80	3.91	N/A	0.0	3.91	1	0.0	18	0.0316	1.50	0.013	0.0014	530.93	531.02	2.21	1.48	0.08	0.03	0.60	0.02	0.06	531.08	532.82	530.85	540.50	LAT B1
0+46.85	0+00.00	46.9	N/A	N/A	0.57	0.70	0.00	0.40	N/A	N/A	N/A	N/A	9.80	3.91	N/A	0.0	3.91	1	0.0	18	0.0316	1.50	0.013	0.0014	530.87	530.93	0.00	2.21	0.00	0.08	0.35	0.03	0.00	530.93	530.85	529.37	540.21	45° BEND
Notes:																																						
STORM DRAIN LINE C																																						
10+19.96	10+00.24	19.7	F	1.05	1.05	0.70	0.74	0.74	N/A	N/A	N/A	N/A	9.80	7.20	N/A	0.0	7.20	1	0.0	24	0.0030	2.00	0.013	0.0010	538.17	538.19	2.29	0.00	0.08	0.00	1.50	0.00	0.08	538.27	534.23	534.17	542.08	ROOF DRAIN
10+00.24	9+86.11	14.1	N/A	N/A	1.05	0.70	0.00	0.74	N/A	N/A	N/A	N/A	9.80	7.20	N/A	0.0	7.20	1	0.0	24	0.0030	2.00	0.013	0.0010	538.10	538.11	2.29	2.29	0.08	0.08	0.35	0.03	0.05	538.17	534.17	534.13	542.00	45° BEND
9+86.11	9+52.31	33.8	N/A	N/A	1.05	0.70	0.00	0.74	N/A	N/A	N/A	N/A	9.80	7.20	N/A	0.0	7.20	1	0.0	24	0.0030	2.00	0.013	0.0010	538.01	538.05	2.29	2.29	0.08	0.08	0.35	0.03	0.05	538.10	534.13	534.03	542.08	45° BEND
9+52.31	9+07.31	45.0	M	0.29	1.34	0.70	0.20	0.94	N/A	N/A	N/A	N/A	9.80	9.19	N/A	0.0	9.19	1	0.0	24	0.0030	2.00	0.013	0.0016	537.85	537.93	2.93	2.29	0.13	0.08	0.60	0.05	0.08	538.01	534.03	533.89	542.47	LAT C14
9+07.31	8+62.31	45.0	M	0.29	1.63	0.70	0.20	1.14	N/A	N/A	N/A	N/A	9.80	11.18	N/A	0.0	11.18	1	0.0	24	0.0030	2.00	0.013	0.0024	537.63	537.74	3.56	2.93	0.20	0.13	0.60	0.08	0.12	537.85	533.89	533.76	543.00	LAT C13
8+62.31	8+56.68	5.6	M	0.29	1.92	0.70	0.20	1.34	N/A	N/A	N/A	N/A	9.80	13.17	N/A	0.0	13.17	1	0.0	24	0.0030	2.00	0.013	0.0034	537.45	537.47	4.19	3.56	0.27	0.20	0.60	0.12	0.15	537.63	533.76	533.74	543.00	LAT C12
8+56.68	8+49.60	7.1	N/A	N/A	1.92	0.70	0.00	1.34	N/A	N/A	N/A	N/A	9.80	13.17	N/A	0.0	13.17	1	0.0	24	0.0030	2.00	0.013	0.0034	537.25	537.28	4.19	4.19	0.27	0.27	0.35	0.10	0.18	537.45	533.74	533.72	542.98	45° BEND
8+49.60	8+23.92	25.7	N/A	N/A	1.92	0.70	0.00	1.34	N/A	N/A	N/A	N/A	9.80	13.17	N/A	0.0	13.17	1	0.0	24	0.0030	2.00	0.013	0.0034	536.99	537.08	4.19	4.19	0.27	0.27	0.35	0.10	0.18	537.25	533.72	533.64	542.60	45° BEND
8+23.92	7+88.48	35.4	N/A	N/A	1.92	0.70	0.00	1.34	N/A	N/A	N/A	N/A	9.80	13.17	N/A	0.0	13.17	1	0.0	24	0.0030	2.00	0.013	0.0034	536.76	536.88	4.19	4.19	0.27	0.27	0.60	0.16	0.11	536.99	533.64	533.54	542.12	LAT C11
7+88.48	7+85.08	3.4	L,J2	0.86	2.78	0.70	0.60	1.95	N/A	N/A	N/A	N/A	9.80	19.07	N/A	0.0	19.07	1	0.0	24	0.0030	2.00	0.013	0.0071	536.33	536.35	6.07	4.19	0.57	0.27	0.60	0.16	0.41	536.76	533.54	533.53	542.08	LAT C16
7+85.08	7+22.16	62.9	N/A	N/A	2.78	0.70	0.00	1.95	N/A	N/A	N/A	N/A	9.80	19.07	N/A	0.0	19.07	1	0.0	24	0.0030	2.00	0.013	0.0071	535.65	536.10	6.07	6.07	0.57	0.57	0.60	0.34	0.23	536.33	533.53	533.34	542.08	LAT C10
7+22.16	6+43.19	79.0	N/A	N/A	2.78	0.70	0.00	1.95	N/A	N/A	N/A	N/A	9.80	19.07	N/A	0.0	19.07	1	0.0	24	0.0030	2.00	0.013	0.0071	534.86	535.42	6.07	6.07	0.57	0.57	0.60	0.34	0.23	535.65	533.34	533.10	542.90	LAT C9
6+43.19	6+10.31	32.9	N/A	N/A	2.78	0.70	0.00	1.95	N/A	N/A	N/A	N/A	9.80	19.07	N/A	0.0	19.07	1	0.0	24	0.0030	2.00	0.013	0.0071	534.40	534.63	6.07	6.07	0.57	0.57	0.60	0.34	0.23	534.86	533.10	533.00	542.47	LAT C8
6+10.31	5+45.73	64.6	N/A	N/A	2.78	0.70	0.00	1.95	N/A	N/A	N/A	N/A	9.80	19.07	N/A	0.0	19.07	1	0.0	24	0.0030	2.00	0.013	0.0071	533.71	534.17	6.07	6.07	0.57	0.57	0.60	0.34	0.23	534.40	533.00	532.81	542.60	LAT C7
5+45.73	5+08.60	37.1	N/A	N/A	2.78	0.70	0.00	1.95	N/A	N/A	N/A	N/A	9.80	19.07	N/A	0.0	19.07	1	0.0	36	0.0084	3.00	0.013	0.0008	533.68	533.71	2.70	6.07	0.11	0.57	0.40	0.23	0.00	533.71	532.81	532.50	542.00	PIPE SIZE CHANGE
5+08.60	4+57.46	51.1	T	0.07	2.85	0.70	0.05	2.00	N/A	N/A	N/A	N/A	9.80	19.55	N/A	0.0	19.55	1	0.0	36	0.0084	3.00	0.013	0.0009	533.64	533.68	2.77	6.07	0.12	0.57	0.60	0.34	0.00	533.68	532.50	532.07	542.00	LAT C6
4+57.46	4+03.67	53.8	N/A	N/A	2.85	0.70	0.00	2.00	N/A	N/A	N/A	N/A	9.80	19.55	N/A	0.0	19.55	1	0.0	36	0.0084	3.00	0.013	0.0009	533.54	533.59	2.77	2.77	0.12	0.12	0.60	0.07	0.05	533.64	532.07	531.62	541.00	LAT C5
4+03.67	3+75.38	28.3	N/A	N/A	2.85	0.70	0.00	2.00	N/A	N/A	N/A	N/A	9.80	19.55	N/A	0.0	19.55	1	0.0	36	0.0084	3.00	0.013	0.0009	533.44	533.47	2.77	2.77	0.12	0.12	0.35	0.04	0.08	533.54	531.62	531.38	539.02	45° BEND
3+75.38	2+85.20	90.2	N/A	N/A	2.85	0.70	0.00	2.00	N/A	N/A	N/A	N/A	9.80	19.55	N/A	0.0	19.55	1	0.0	36	0.0084	3.00	0.013	0.0009	533.29	533.36	2.77	2.77	0.12	0.12	0.35	0.04	0.08	533.44	531.38	530.63	539.50	45° BEND
2+85.20	2+45.36	39.8	N/A	N/A	2.85	0.70	0.00	2.00	N/A	N/A	N/A	N/A	9.80	19.55	N/A	0.0	19.55	1	0.0	36	0.0084	3.00	0.013	0.0009	533.21	533.24	2.77	2.77	0.12	0.12	0.60	0.07	0.05	533.29	530.63	530.29	542.00	LAT C4
2+45.36	1+51.63	93.7	U	0.07	2.92	0.70	0.05	2.04	N/A	N/A	N/A	N/A	9.80	20.03	N/A	0.0	20.03	1	0.0	36	0.0084	3.00	0.013	0.0009	533.07	533.15	2.83	2.77	0.12	0.12	0.60	0.07	0.05	533.21	530.29	529.51	542.00	LAT C3
1+51.63	1+20.50	31.1	V	0.07	2.99	0.70	0.05	2.09	N/A	N/A	N/A	N/A	9.80	20.51	N/A	0.0	20.51	1	0.0	36	0.0084	3.00	0.013	0.0009	532.98	533.01	2.90	2.83	0.13	0.12	0.60	0.07	0.06	533.07	529.51	529.25	541.98	LAT C2
1+20.50	0+84.00	36.5	N/A	N/A	2.99	0.70	0.00	2.09	N/A	N/A	N/A	N/A	9.80	20.51	N/A	0.0	20.51	1	0.0	36	0.0084	3.00	0.013	0.0009	532.86	532.90	2.90	2.90	0.13	0.13	0.35	0.05	0.08	532.98	529.25	528.94	540.00	45° BEND
0+84.00	0+28.09	55.9	P,F,I	3.21	6.20	0.70	2.25	4.34	N/A	N/A	N/A	N/A	9.80	42.53	N/A	0.0	42.53	1	0.0	36	0.0100	3.00	0.013	0.0041	532.15	532.38	6.02	2.90	0.56	0.13	0.60	0.08	0.48	532.86	527.84	527.28	537.50	LINE D
0+28.09	0+15.00	13.1	G,K	3.16	9.36	0.70	2.21	6.55	N/A	N/A	N/A	N/A	9.80	64.21	N/A	0.0	64.21	1	0.0	36	0.0100	3.00	0.013	0.0092	531.09	531.21	9.08	6.02	1.28	0.56	0.60	0.34	0.94	532.15	527.28	527.15	531.50	LAT C1
0+15.00	0+00.00	15.0	N/A	N/A	9.36	0.70	0.00	6.55	N/A	N/A	N/A	N/A	9.80	64.21	N/A	0.0	64.21	1	0.0	36	0.0100	3.00	0.013	0.0092	530.95	531.09	0.00	9.08	0.00	1.28	0.35	0.45	0.00	531.09	527.15	527.00	531.00	45° BEND
Notes:																																						
STORM DRAIN LINE D																																						
6+01.56	5+11.22	90.3	P	1.90	1.90	0.70	1.33	1.33	N/A	N/A	N/A	N/A	9.80	13.03	N/A	0.0	13.03	1	0.0	24	0.0094	2.00	0.013	0.0033	534.17	534.47	4.15	0.00	0.27	0.00	1.50	0.00	0.27	534.74	535.74	534.90	539.23	CURB INLET
5+11.22	4+43.24	68.0	N/A	N/A	1.90	0.70	0.00	1.33	N/A	N/A	N/A	N/A	9.80	13.03	N/A	0.0	13.03	1	0.0	24	0.0094	2.00	0.013	0.0033	533.78	534.00	4.15	4.15	0.27	0.27	0.35	0.09	0.17	534.17	534.90	534.26	540.00	45° BEND
4+43.24	4+30.88	12.4	N/A	N/A	1.90	0.70	0.00	1.33	N/A	N/A	N/A	N/A	9.80	13.03	N/A	0.0	13.03	1	0.0	24	0.0094	2.00	0.013	0.0033	533.56	533.60	4.15	4.15	0.27	0.27	0.35	0.09	0.17	533.78	534.26	534.14	541.00	45° BEND
4+30.88	4+21.43	9.4	N/A	N/A	1.90	0.70	0.00	1.33	N/A	N/A	N/A	N/A	9.80	13.03	N/A	0.0	13.03	1	0.0	36	0.0115	3.00	0.013	0.0004	533.56	533.56	1.84	4.15	0.05	0.27	0.60	0.16	0.00	533.56	533.28	533.17	540.50	PIPE SIZE CHANGE
4+21.43	3+87.58	33.9	F	1.06	2.96	0.70	0.74	2.07	N/A	N/A	N/A	N/A	9.80	20.31	N/A	0.0	20.31	1	0.0	36	0.0115	3.00	0.013	0.0009	533.43	533.46	2.87	1.84	0.13	0.05	0.60	0.03	0.10	533.56	533.17	532.78	540.50	LAT D6
3+87.58	3+16.60	71.0	N/A	N/A	2.96	0.70	0.00	2.07	N/A	N/A	N/A	N/A	9.80	20.31	N/A	0.0	20.31	1	0.0	36	0.0115	3.00	0.013	0.0009	533.31	533.38	2.87	2.87	0.13	0.13	0.60	0.08	0.05	533.43	532.78	531.97	540.50	LAT D5
3+16.60	2+51.18	65.4	N/A	N/A	2.96	0.70	0.00	2.07	N/A	N/A	N/A	N/A	9.80	20.31	N/A	0.0	20.31	1	0.0	36	0.0115	3.00	0.013	0.0009	533.20	533.26	2.87	2.87	0.13	0.13	0.60	0.08	0.05	533.31	531.97	531.22	540.50	LAT D4
2+51.18	1+81.87	69.3	N/A	N/A	2.96	0.70	0.00	2.07	N/A	N/A	N/A	N/A	9.80	20.31	N/A	0.0	20.31	1	0.0	36	0.0115	3.00	0.013	0.0009	533.09	533.15	2.87	2.87	0.13	0.13	0.60	0.08	0.05	533.20	531.22	530.42	542.00	LAT D3
1+81.87	0+14.47	167.4	N/A	N/A	2.96	0.70	0.00	2.07	N/A	N/A	N/A	N/A	9.80	20.31	N/A	0.0	20.31	1	0.0	36	0.0115	3.00	0.013	0.0009	532.88	533.03	2.87	2.87	0.13	0.13	0.60	0.08	0.05	533.09	530.42	528.51	541.50	LAT D2
0+14.47	0+00.00	14.5	I	0.25	3.21	0.70	0.18	2.25	N/A	N/A	N/A	N/A	9.80	22.02	N/A	0.0	22.02	1	0.0	36	0.0115	3.00	0.013	0.0011	532.86	532.88	0.00	2.87	0.00	0.13	0.60	0.08	0.00	532.88	528.51	528.34	538.00	LAT D1
Notes:																																						
STORM DRAIN LINE E																																						
2+62.06	2+00.56	61.5	DETENTION	N/A	N/A	0.70	0.00	0.00	N/A	N/A	N/A	N/A	9.80	22.96	N/A	0.0	22.96	1	0.0	24	0.0037	2.00	0.013	0.0077	529.64	530.12	7.31	0.00	0.83	0.00	1.50	0.00	0.83	530.95	525.99	525.76	526.00	DETENTION OUTLET
2+00.56	0+36.77	163.8	N/A	N/A	0.00	0.70	0.00	0.00	N/A	N/A	N/A	N/A	9.80	22.96	N/A	0.0	22.96	1	0.0	24	0.0037	2.00	0.013	0.0077	527.84	529.10	7.31	7.31	0.83	0.83	0.35	0.29	0.54	529.64	525.76	525.16	533.00	45° BEND
0+36.77	0+29.77	7.0	N/A	N/A	0.00	0.70	0.00	0.00	N/A	N/A	N/A	N/A	9.80	22.96	N/A	0.0	22.96	1	0.0	24	0.0037	2.00	0.013	0.0077	527.25	527.30	7.31	7.31	0.83	0.83	0.35	0.29	0.54	527.84	525.16	525.13	533.00	45° BEND
0+29.77	0+00.00	29.8	N/A	N/A	0.00	0.70	0.00	0.00	N/A	N/A	N/A	N/A	9.80	22.96	N/A	0.0	22.96	1	0.0	24	0.0037	2.00	0.013	0.0077	527.02	527.25	0.00	7.31	0.00	0.83	0.35	0.29	0.00	527.25	525.13	525.02	532.50	45° BEND
Notes:																																						
STORM DRAIN LAT C1																																						
1+45.43	1+17.91	27.5	K	2.28	2.28	0.70	1.60	1.60	N/A	N/A	N/A	N/A	9.80	15.64	N/A	0.0	15.64	1	0.0	24	0.0534	2.00	0.013	0.0222	532.28	532.89	4.98	0.00	0.38	0.00	1.50	0.00	0.38	533.27	530.00	528.53	533.30	INLET
1+17.91	0+16.72	101.2	G	0.88	3.16	0.70	0.62	2.21	N/A	N/A	N/A	N/A	9.80	21.68	N/A	0.0	21.68	1	0.0	36	0.0100	3.00	0.013	0.0011	532.17	532.28	3.07	4.98	0.15	0.38	1.50	0.58	0.00	532.28	528.46	527.45	534.50	INLET
0+16.72	0+00.00	16.7	N/A	N/A	3.16	0.70	0.00	2.21	N/A	N/A	N/A	N/A	9.80	21.68	N/A	0.0	21.68	1	0.0	36	0.0100	3.00	0.013	0.0011	532.15	532.17	0.00	3.07	0.00	0.15	0.35	0.05	0.00	532.17	527.45	527.28	535.30	45° BEND
Notes:																																						
STORM DRAIN LAT A1																																						
0+21.23	0+04.31	16.9	E	0.54	0.54	0.70	0.38	0.38	N/A	N/A	N/A	N/A	9.80	3.70	N/A	0.0	3.70	1	0.0	18	0.2064	1.50	0.013	0.0012	531.20	531.22	2.10	0.00	0.07	0.00	1.50	0.00	0.07	531.29	534.00	530.51	538.00	INLET
0+04.31	0+00.00	4.3	N/A	N/A	0.54	0.70	0.00	0.38	N/A	N/A	N/A	N/A	9.80	3.70	N/A	0.0	3.70	1	0.0	18	0.2064	1.50	0.013	0.0012	531.19	531.20	0.00	2.10	0.00	0.07	0.35	0.02	0.00	531.20	530.51	529.62	539.00	45° BEND
Notes:																																						
STORM DRAIN LAT B1																																						
0+36.73	0+00.00	36.7	H	0.19	0.19	0.70	0.13	0.13	N/A	N/A	N/A	N/A	9.80	1.30	N/A	0.0	1.30	1	0.0	18	0.0925	1.50	0.013	0.0002	531.08	531.08	0.74	0.00	0.01	0.00	1.50	0.00	0.01	531.09	536.22	532.82	540.22	INLET
Notes:																																						
STORM DRAIN LAT B2																																						
0+38.69	0+00.00	38.7	S	0.18	0.18	0.70	0.13	0.13	N/A	N/A	N/A	N/A	9.80	1.23	N/A	0.0	1.23	1	0.0	18	0.0657	1.50	0.013	0.0001	531.16	531.16	0.70	0.00	0.01	0.00	1.50	0.00	0.01	531.17	537.92	535.38	542.42	INLET
Notes:																																						
STORM DRAIN LAT C2																																						
0+26.73	0+00.00	26.7	I	0.76	0.76	0.70	0.53	0.53	N/A	N/A	N/A	N/A	9.80	5.21	N/A	0.0	5.21	1	0.0	12	0.1572	1.00	0.013	0.0215	533.07	533.64	6.64	0.00	0.68	0.00	1.50	0.00	0.68	534.33	534.12	529.92	540.42	INLET
Notes:																																						
STORM DRAIN LAT A2																																						
0+13.34	0+00.00	13.3	W	0.09	0.09	0.70	0.06	0.06	N/A	N/A	N/A	N/A	9.80	0.62	N/A	0.0	0.62	1	0.0	12	0.1720	1.00	0.013	0.0003	531.24	531.25	0.79	0.00	0.01	0.00	1.50	0.00	0.01	531.26	532.50	530.21	536.50	INLET
Notes:																																						
STORM DRAIN LAT C3																																						
0+08.75	0+00.00	8.8	U	0.07	0.07	0.70	0.05	0.05	N/A	N/A	N/A	N/A	9.80	0.48	N/A	0.0	0.48	1	0.0	12	0.7667	1.00	0.013	0.0002	534.17	534.18	0.61	0.00	0.01	0.00	1.50	0.00	0.01	534.18	537.42	530.71	540.42	INLET
Notes:																																						
STORM DRAIN LINE C16																																						
0+98.60	0+12.00	86.6	F2,G	0.43	0.43	0.70	0.30	0.30	N/A	N/A	N/A	N/A	9.80	2.95	N/A	0.0	2.95	1	0.0	18	0.0251	1.50	0.013	0.0008	536.77	536.84	1.67	0.00	0.04	0.00	1.50	0.00	0.04	536.88	537.48	535.31	542.50	INLET
0+12.00	0+00.00	12.0	N/A	N/A	0.43	0.70	0.00	0.30	N/A	N/A	N/A	N/A	9.80	2.95	N/A	0.0	2.95	1	0.0	18	0.0251	1.50	0.013	0.0008	536.76	536.77	0.00	1.67	0.00	0.04	0.35	0.02	0.00	536.77	535.31	535.01	542.90	JUNCTION LAT C18

Stantec

Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
Tel: (214)



GENERAL WATER NOTES:

1. WATER DISTRIBUTION SYSTEM MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE CITY OF ROCKWALL STANDARDS AND NCTCOG 4TH EDITION.
2. CONCRETE BLOCKING SHALL BE INSTALLED AT ALL BENDS, VALVES, AND FIRE HYDRANTS.
3. ALL MAINS SHALL BE BURIED A MINIMUM DEPTH OF 42" BELOW TOP OF ADJACENT CURB OR AS DIRECTED BY THE ENGINEER.
4. WATER PIPE SHALL BE PVC CLASS 200, PVC C-900 (DR 14) FOR SIZES UNDER 16" DIA. WATER PIPE SHALL BE PVC CLASS 235 (DR 18)PVC C-905 FOR SIZES 16" AND OVER IN DIA.
5. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCING CONSTRUCTION. DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
6. ALL FIRE HYDRANTS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF ROCKWALL. CONTRACTOR SHALL NOTIFY ROCKWALL FIRE DEPARTMENT PRIOR TO PLACING OF PIPE TO ARRANGE FOR REQUIRED INSPECTIONS. ALL FIRE HYDRANTS SHALL HAVE A MINIMUM CLEARANCE OF 5 FEET FROM BACK OF CURB.
7. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING WATER VALVES PRIOR CONNECTION TO EXISTING WATER SYSTEM.
8. INSTALL BLUE 3M EMS DISKS AT ALL TEES AND BENDS ON WATER LINES. REFERENCE VALVE INSTALLATION DETAIL.
9. INSTALL BLUE EMS DISKS ON WATER LINE EVERY 250', BEND, VALVE, FIRE HYDRANT, AND CONNECTION.

BENCHMARKS:

BENCHMARK #1:
SPK NAIL IN CENTER OF HUBBARD DRIVE .
N 6985121.0710 E 2586167.9530
ELEVATION=456.02

BENCHMARK #2:
3" ALUMINUM DISK SET IN CONCRETE
N.W. CORNER OF LIFT STATION FENCE.
N 6988281.3710 E 2587591.4680
ELEVATION=524.55

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.

SIGN: Chevalyn Armijo

DATE: 06/01/2020

Glenn Engineering Corporation

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Stantec

Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
Tel: (214) 473-2400 / Fax: (214) 473-2401
www.stantec.com

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Consultants

GLENN ENGINEERING
T.B.P.E. FIRM REGISTRATION NO. F - 303
PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02

Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
LICENSED
PROFESSIONAL
ENGINEER

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project

Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title

WATER PLAN

Project No.	Scale
214000654	AS SHOWN

Revision: 8

Drawing No.: C 05.00

Plotted: Jun 1, 2020, 1:56 PM by user: john - Saved: 6/1/2020 by user: john
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK ELEM ENG - RECORD SET.dwg

SANITARY SEWER NOTES:

1. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND OTHERS WHO MAY HAVE BURIED EQUIPMENT OR PIPELINES IN THE VICINITY OF CONSTRUCTION PRIOR TO COMMENCING CONSTRUCTION. DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

2. CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF TIE-IN TO EXISTING SEWER SYSTEM. IF GRADES NEED REVISING DUE TO UNFORESEEN CONFLICTS, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO LAYING PIPE.

3. UNLESS OTHERWISE REQUIRED, ALL SANITARY SEWER PIPE, MANHOLES, AND RELATED APPURTENANCES SHALL CONFORM TO THE MATERIAL AND CONSTRUCTION SPECIFICATIONS AS SET FORTH IN THE CITY OF WAXAHACHIE STANDARD SPECIFICATIONS.

4. PARTICULAR ATTENTION SHALL BE PAID TO THE INSTALLATION, EMBEDMENT, AND BACKFILL OF SEWER PIPE. ALL EMBEDMENT SHALL CONFORM TO CITY OF WAXAHACHIE CLASS 'B'.

5. SPECIAL CARE SHALL BE TAKEN IN ADHERING TO THOSE SPECIFICATIONS REGARDING PIPE JOINTS, PIPE EMBEDMENT AND TESTING OF INSTALLED WATER AND SANITARY SEWER PIPES.

6. SEWER PIPE SHALL BE PVC SDR 26.

7. UNLESS OTHERWISE SHOWN SERVICES SHALL BE 4" PVC, SDR 35, AND SHALL BE INSTALLED AS SHOWN.

8. CONTRACTOR SHALL MEET ALL O.S.H.A. REQUIREMENTS REGARDING TRENCH SAFETY IN THE CONSTRUCTION OF THIS SEWER SERVICE.

BENCHMARKS:

BENCHMARK #1:
SPK NAIL IN CENTER OF HUBBARD DRIVE .
N 6985121.0710 E 2586167.9530
ELEVATION=456.02

BENCHMARK #2:
3" ALUMINUM DISK SET IN CONCRETE
N.W. CORNER OF LIFT STATION FENCE.
N 6988281.3710 E 2587591.4680
ELEVATION=524.55

N

0 15 30 60
Scale: 1"=30'

STA. 0+00 LATERAL 'SS-5' =
STA. 5+78 LINE 'SS-1'
CONTRACTOR TO INSTALL
STD. 4' DIA. MANHOLE
TOP=540.58 MATCH FLUSH
FL 6" IN=538.27
FL 8" OUT=538.17

STA. 0+50 LATERAL 'SS-5'
END AND PLUG 6" SS LINE
5' FROM BUILDING, REF. M.E.P.
PLANS FOR CONTINUATION
FL 6"=538.50
WITH DOUBLE CLEANOUT

STA. 0+61 LATERAL 'SS-4'
END AND PLUG 6" SS LINE
5' FROM BUILDING, REF. M.E.P.
PLANS FOR CONTINUATION
FL 6"=538.50
WITH DOUBLE CLEANOUT

STA. 0+05 LATERAL 'SS-4'
6" 45° BEND
FL 6"=538.32

STA. 0+00 LATERAL 'SS-3' =
STA. 4+17 LINE 'SS-1'
CONTRACTOR TO INSTALL
DBL. CLEAN-OUT
TOP=542.10 MATCH FLUSH
FL 6" IN=537.56
FL 8" IN=537.48
FL 8" OUT=537.48

STA. 0+75 LATERAL 'SS-3'
END AND PLUG 6" SS LINE
5' FROM BUILDING, REF. M.E.P.
PLANS FOR CONTINUATION
FL 6"=538.50
WITH DOUBLE CLEANOUT

STA. 0+00 LATERAL 'SS-4' =
STA. 0+59 LATERAL 'SS-3'
6"x6" 45° WYE
FL 6" IN=538.31
FL 6" IN=538.31
FL 6" OUT=538.31

STA. 0+10 LATERAL 'SS-7'
END AND PLUG 6" SS LINE
5' FROM BUILDING, REF. M.E.P.
PLANS FOR CONTINUATION
FL 6"=538.50
WITH DOUBLE CLEANOUT

STA. 0+00 LATERAL 'SS-2' =
STA. 3+03 LINE 'SS-1'
CONTRACTOR TO INSTALL
DBL. CLEAN-OUT
TOP=542.00 MATCH FLUSH
FL 6" IN=537.08
FL 8" IN=536.99
FL 8" OUT=536.99

STA. 0+30 LATERAL 'SS-2'
END AND PLUG 6" SS LINE
5' FROM BUILDING, REF. M.E.P.
PLANS FOR CONTINUATION
FL 6"=538.50
WITH DOUBLE CLEANOUT

STA. 2+43 LATERAL 'SS-6'
END AND PLUG 6" SS LINE
5' FROM BUILDING, REF. M.E.P.
PLANS FOR CONTINUATION
FL 6"=538.50
WITH DOUBLE CLEANOUT

STA. 0+00 LATERAL 'SS-6' =
STA. 2+04 LINE 'SS-1'
CONTRACTOR TO INSTALL
STD. 4' DIA. MANHOLE
TOP=542.19 MATCH FLUSH
FL 6" IN=536.66
FL 8" IN=536.57
FL 8" OUT=536.47 (PLUGGED)

STA. 2+35 LATERAL "SS-6" =
CONTRACTOR TO INSTALL
STD. GREASE TRAP SEE MEP
FOR SIZE AND ELEVATION
TOP = MATCH FLUSH

STA. 0+00 LINE 'SS-1'
CONTRACTOR TO FIELD
CONNECT TO EXISTING
STUB-OUT.
FL EX. 8"=535.50 (PLUGGED)
FL 8" IN=535.50
SEE STONE CREEK -
SANITARY SEWER PLAN
FOR EX. PLAN AND PROFILES

STA. 0+20 LINE 'SS-1'
CONTRACTOR TO INSTALL
STD. 4' DIA. MANHOLE
TOP=542.23 MATCH FLUSH
FL 8" IN=535.56
FL 8" OUT=535.66

STA. 0+68 LINE 'SS-1'
CONTRACTOR TO INSTALL
STD. 4' DIA. MANHOLE
TOP=543.77 MATCH FLUSH
FL 8" IN=535.82
FL 8" OUT=535.92

STA. 0+00 LATERAL 'SS-7' =
STA. 1+82 LATERAL 'SS-6'
CONTRACTOR TO INSTALL
DBL. CLEAN-OUT
FL 6" IN=538.04
FL 6" IN=538.04
FL 6" OUT=538.04

STA. 2+13 LATERAL 'SS-6'
CONTRACTOR TO INSTALL
DBL. CLEAN-OUT
FL 6" IN=538.27
FL 6" OUT=538.27

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN:
DATE: 06/01/2020
Glenn Engineering Corporation

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

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PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision			
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100%CD - For Bidding and Construction	RAH	CMG	2019.03.01
Issued	By	Appd	YYYY.MM.DD

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STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
SANITARY SEWER PLAN

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C05.01

Plotted: Jun 1, 2020, 1:57 PM by user: john - Saved: 6/1/2020 by user: john
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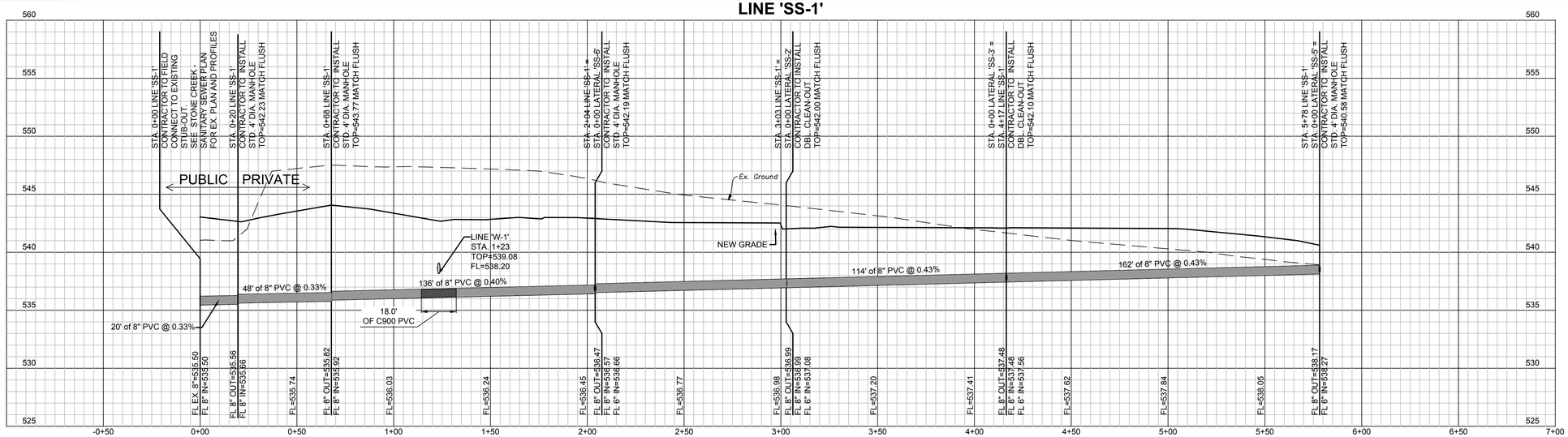
LINE 'SS-1'



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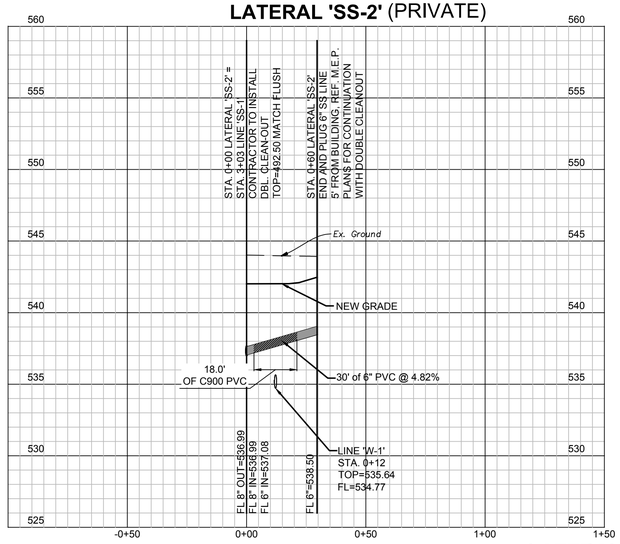

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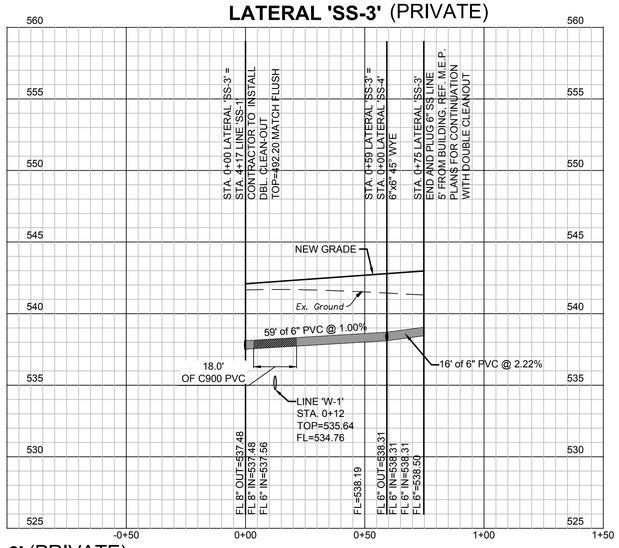

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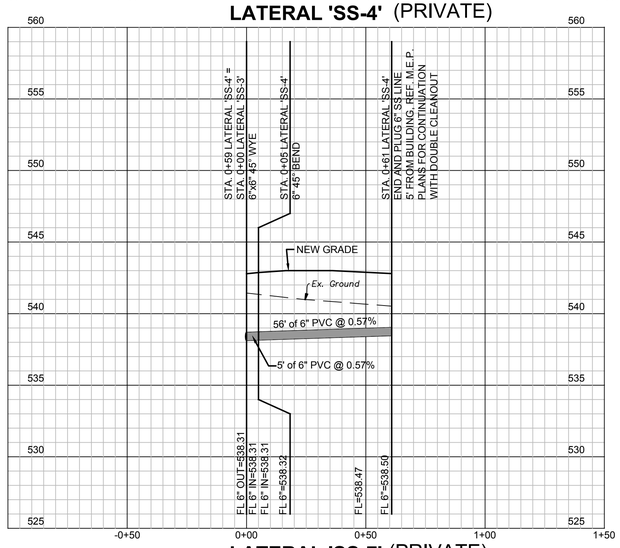

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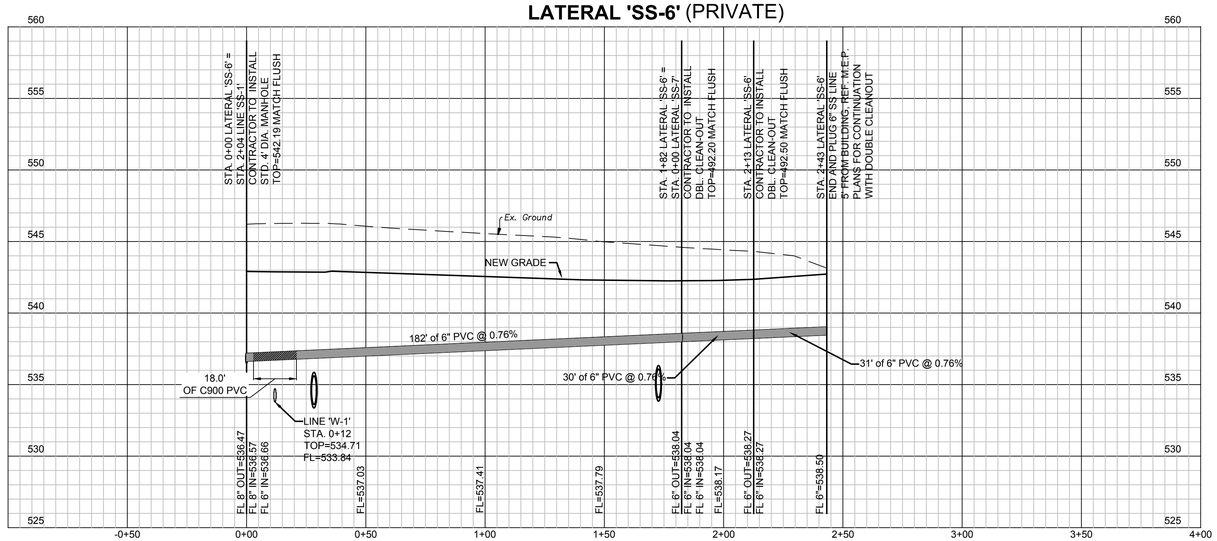

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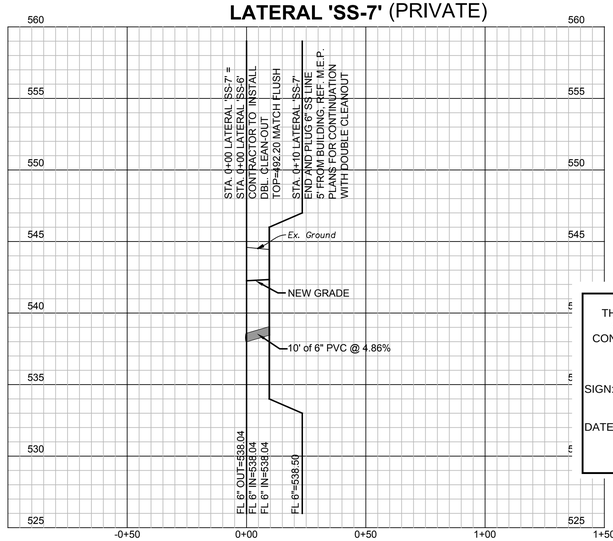

0 15 30 60
Horizontal Scale: 1" = 30'
0 1 2 3 4 5 10
Vertical Scale: 1" = 5'

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4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
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Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

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STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER

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Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
SANITARY SEWER PROFILES

Project No.	Scale
214000654	AS SHOWN

Revision: 8
Drawing No.: C 05.02

Plotted: Jun 1, 2020, 1:58 PM by user: john - Saved: 6/1/2020 by user: john
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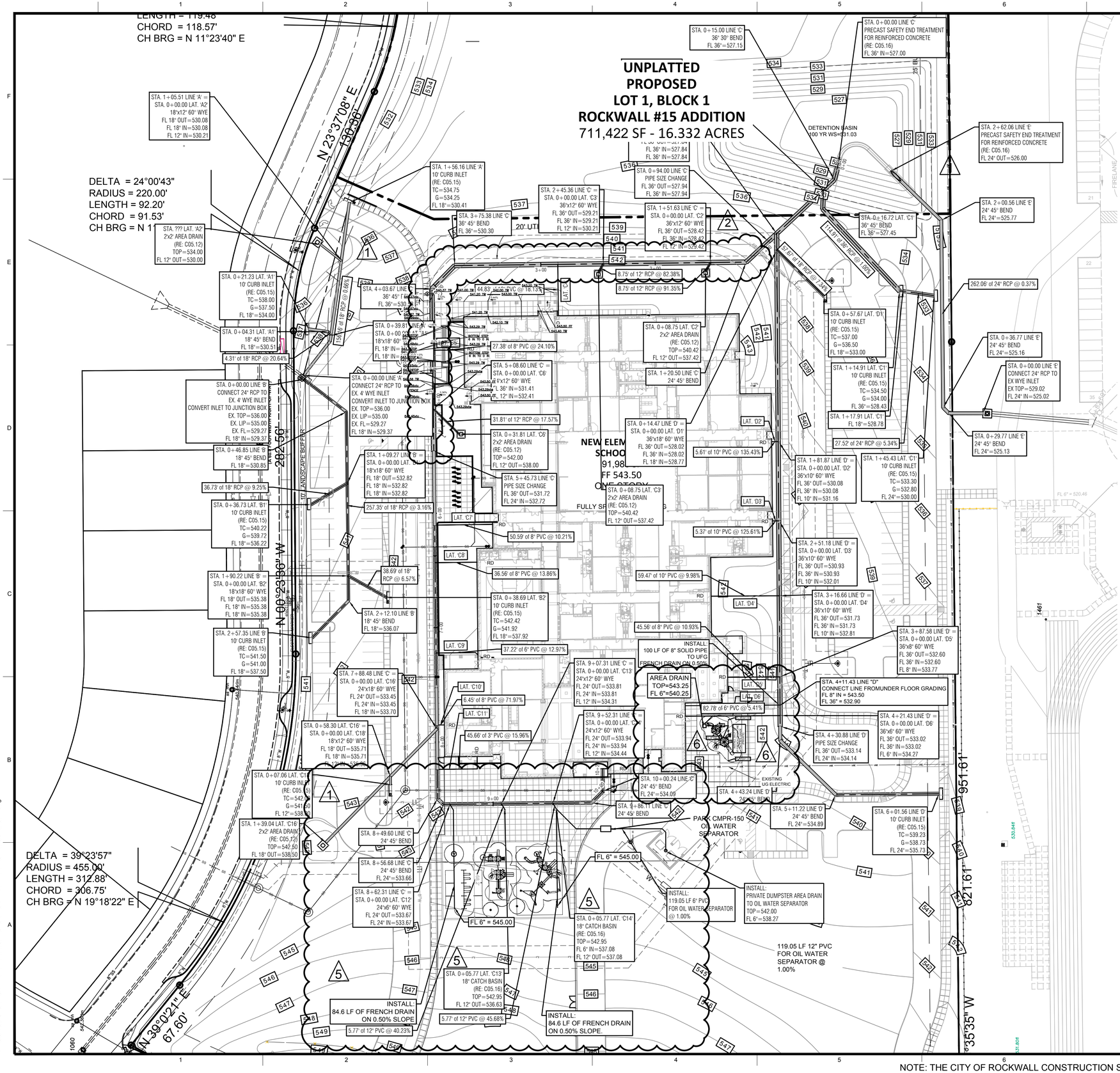


GENERAL STORM SEWER NOTES:

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH THESE PLANS AND CITY OF ROCKWALL STANDARDS AND SPECIFICATIONS.
2. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL MAKE CERTAIN THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY.
4. IN THE EVENT AN ITEM IS NOT COVERED IN THE CITY OF ROCKWALL SPECIFICATIONS, THE ENGINEER'S DECISION SHALL APPLY.
5. BARRICADING, TRAFFIC CONTROL, AND PROJECT SIGNS SHALL CONFORM TO "STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION BARRICADING AND CONSTRUCTION STANDARDS".
6. THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF ANY CONSTRUCTION. IN THE EVENT OF ANY CONFLICT AND PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, IMMEDIATELY NOTIFY ENGINEER. MINOR ADJUSTMENTS OF FINISH GRADE TO ACCOMPLISH SPOT DRAINAGE ARE ACCEPTABLE, IF NECESSARY, UPON PRIOR APPROVAL OF ENGINEER. PAVING INSTALLED SHALL 'FLUSH OUT' AT ANY JUNCTURE WITH EXISTING PAVING.
7. THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR UTILITIES PRIOR TO STARTING CONSTRUCTION.
8. CONTRACTOR SHALL VERIFY ALL EXISTING INVERTS, RIM ELEVATIONS AND SIZES PRIOR TO CONSTRUCTION.
9. ALL NON RCP DRAIN PIPE SHALL BE PVC SCH 40, ADS OR APPROVED EQUAL.
10. ALL RCP SHALL BE CLASS III.
11. W.E. AS INDICATED ON INLET CALLS INDICATES WATER ELEVATION AT INLET DURING 100 YEAR STORM EVENT.

BENCHMARKS:

BENCHMARK #1:
SPK NAIL IN CENTER OF HUBBARD DRIVE .
N 6985121.0710 E 2586167.9530
ELEVATION=456.02

BENCHMARK #2:
3" ALUMINUM DISK SET IN CONCRETE
N.W. CORNER OF LIFT STATION FENCE.
N 6988281.3710 E 2587591.4680
ELEVATION=524.55

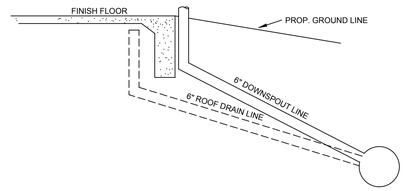
N

0 40 80

Scale 1" = 40'

NOTE:
SEE SHEET MEP SHEET PL 1.1 FOR DOWNSPOUT & ROOF DRAIN LOCATIONS. ALL ROOF DRAINS & DOWNSPOUTS SHALL BE CONNECTED TO STORM SEWER SYSTEM.

NOTE:
ALL STORM SEWER IS CONSIDERED PRIVATE



DOWNSPOUT DETAIL

NTS

NOTE:
1. AT ALL LOCATIONS OF DOWNSPOUTS AND ROOF DRAINS A 6" PVC PIPE IS TO BE INSTALLED FROM THE 12" PVC LINE TO THE FOUNDATION AND EXTEND UP ABOVE THE FINISH FLOOR ELEVATION. SEE ARCHITECTURAL PLAN FOR THE CONNECTION DETAIL AND THE ROOF PLAN FOR ACTUAL DOWNSPOUT AND ROOF DRAIN LOCATIONS.

RECORD DRAWING
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2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

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Client/Project

Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

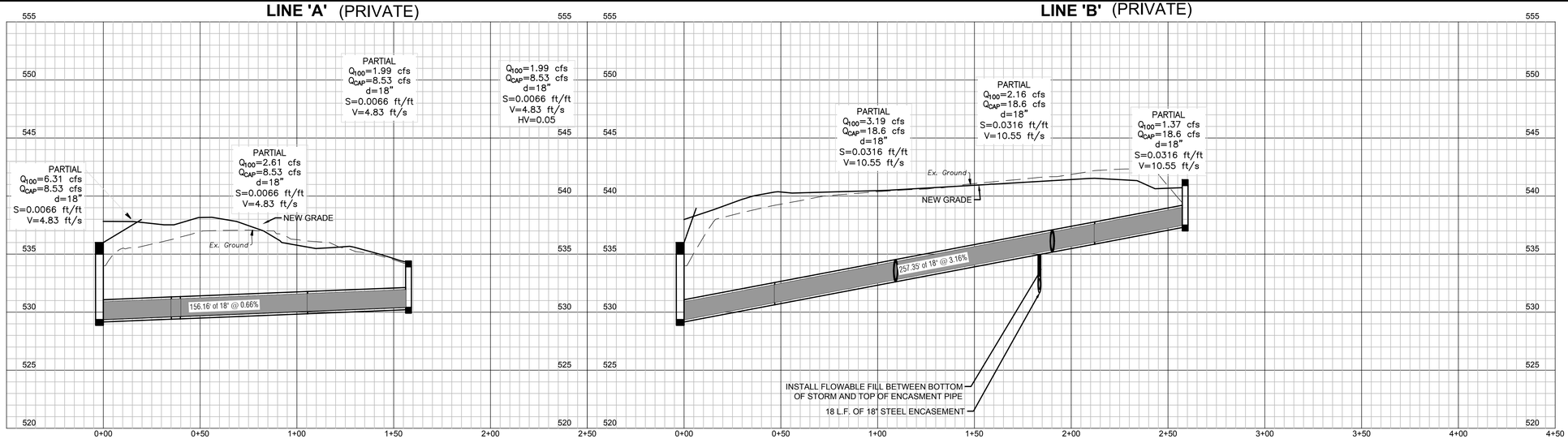
Title

STORM SEWER PLAN

Project No.	Scale
214000654	AS SHOWN
Revision	Drawing No.
8	C05.03

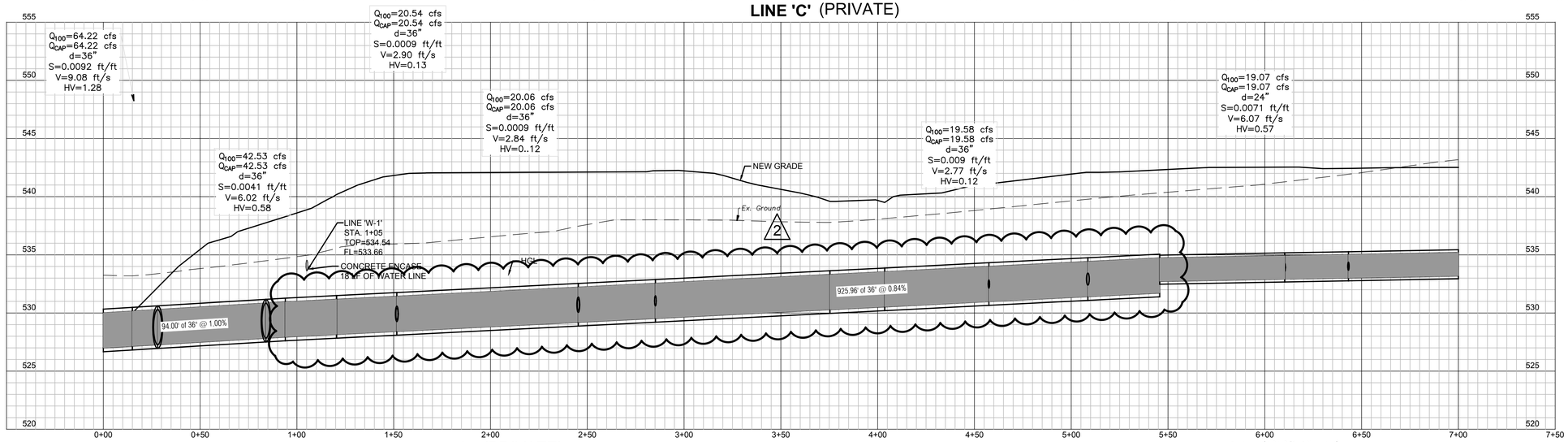
Plotted: Jun 1, 2020, 2:0 PM by user: john - Saved: 6/1/2020 by user: john
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK ELEM ENG - RECORD SET.dwg

LINE 'A' (PRIVATE)



LINE 'B' (PRIVATE)

LINE 'C' (PRIVATE)



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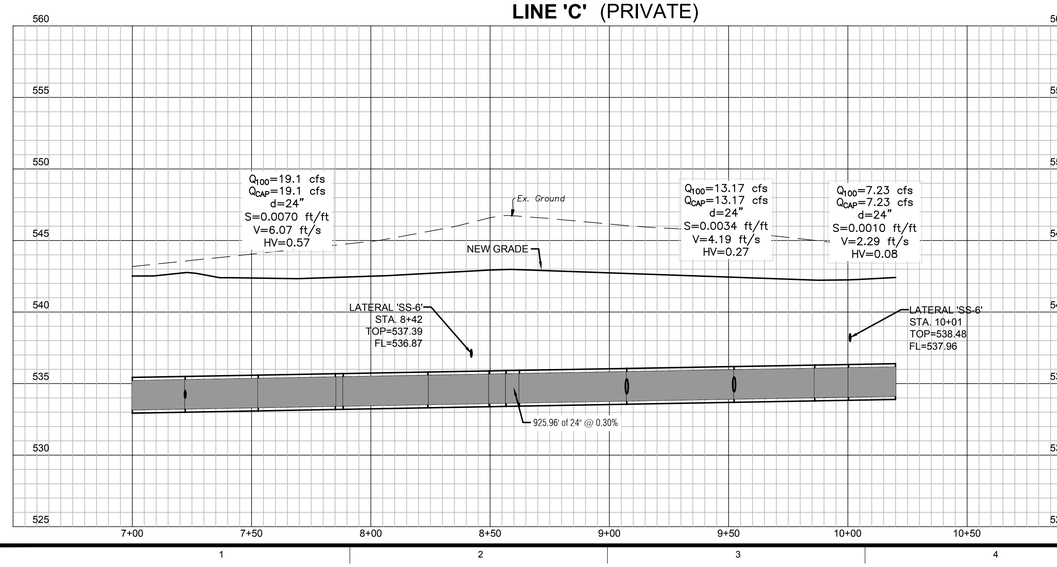

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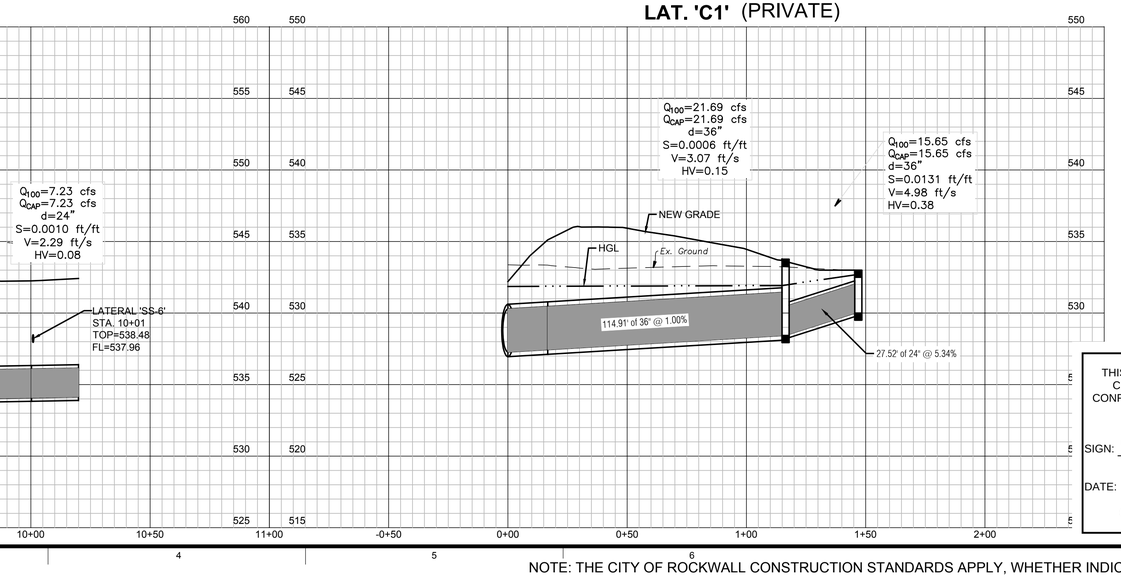

NOTE:
ALL STORM SEWER IS CONSIDERED PRIVATE

0 15 30 60
Horizontal Scale: 1" = 30'
0 1 2 3 4 5 10
Vertical Scale: 1" = 5'

RECORD DRAWING
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Issued	**By**	**Appd**	**YYYY.MM.DD**
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

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Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
STORM SEWER PROFILES

Project No.	Scale
214000654	AS SHOWN
Revision	Drawing No.
8	C 05.04

Plotted: Jun 1, 2020, 2:0 PM by user: john - Saved: 6/1/2020 by user: john
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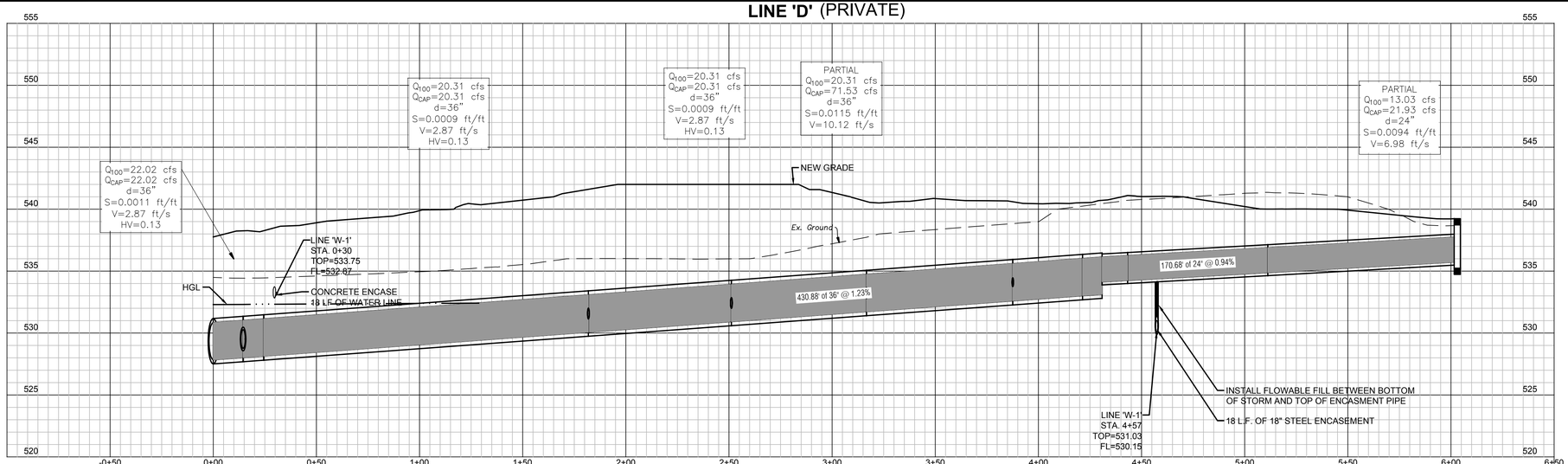

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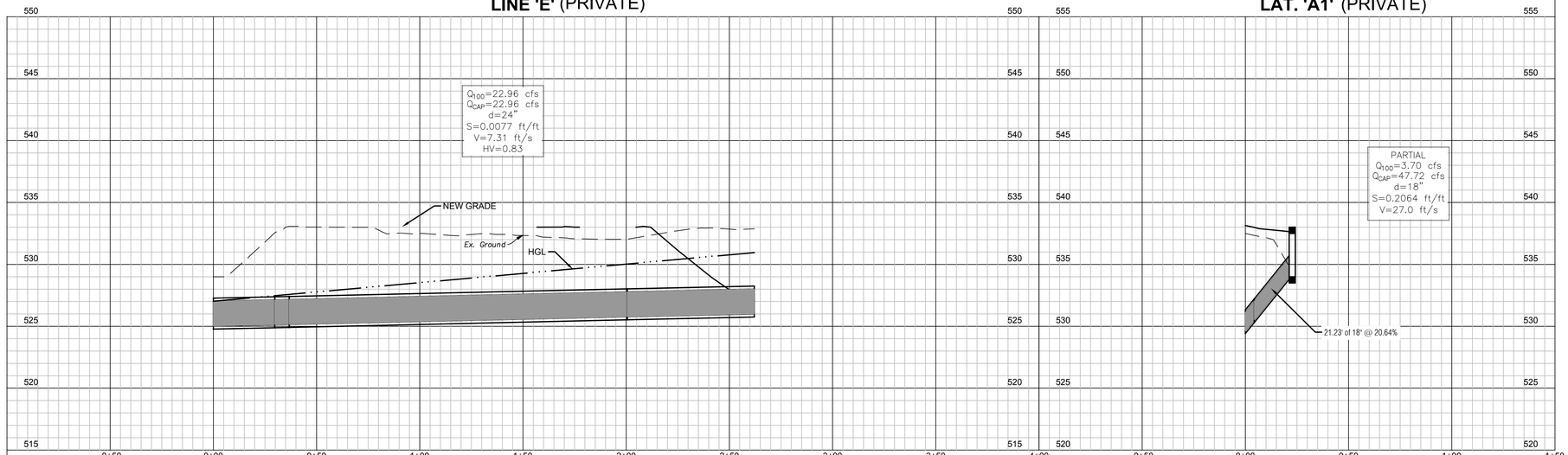

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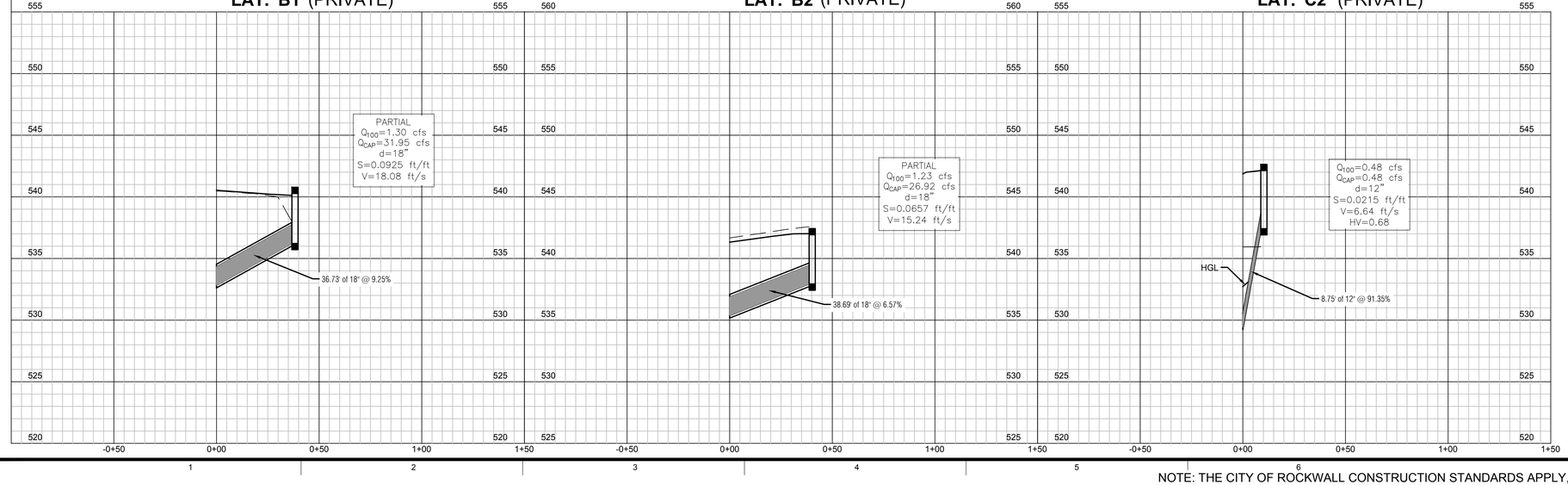
LAT. 'B1' (PRIVATE)



LAT. 'B2' (PRIVATE)

LAT. 'C2' (PRIVATE)

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0 15 30 60
Horizontal Scale: 1" = 30'

0 1 2 3 4 5 10
Vertical Scale: 1" = 5'

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Consultants

GLENN ENGINEERING
T.B.P.E. FIRM REGISTRATION NO. F - 303
PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.15
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02

Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project

Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title

STORM SEWER PROFILES

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 05.05

Plotted: Jun 1, 2020, 2:1 PM by user: john - Saved: 6/1/2020 by user: john
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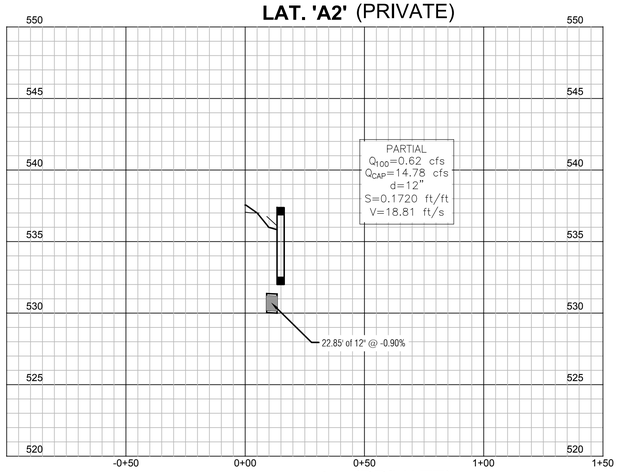

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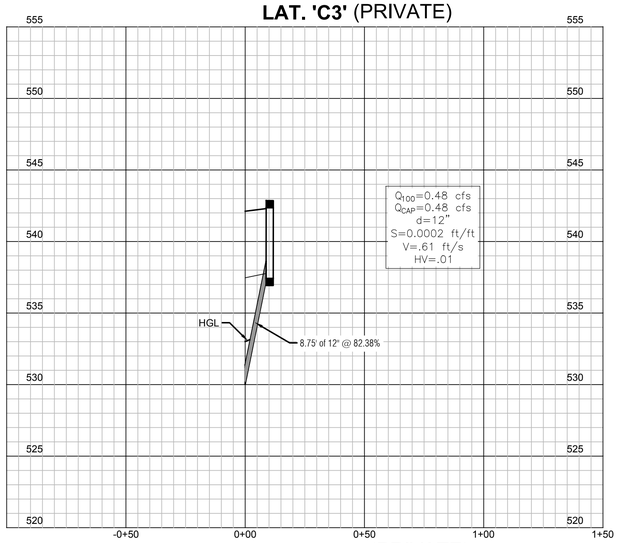

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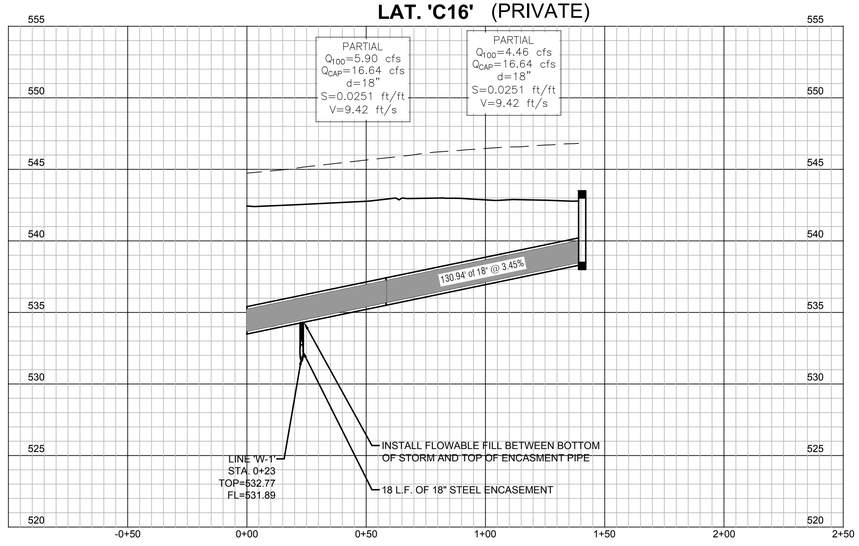

NOTE:
ALL STORM SEWER IS CONSIDERED PRIVATE

0 15 30 60
Horizontal Scale: 1" = 30'

0 1 2 3 4 5 10
Vertical Scale: 1" = 5'

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.

SIGN:

DATE: 06/01/2020

Glenn Engineering Corporation

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Stantec

Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
Tel: (214) 473-2400 / Fax: (214) 473-2401
www.stantec.com

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Consultants

GLENN ENGINEERING
T.B.P.E. FIRM REGISTRATION NO. F - 303
PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02

Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project

Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title

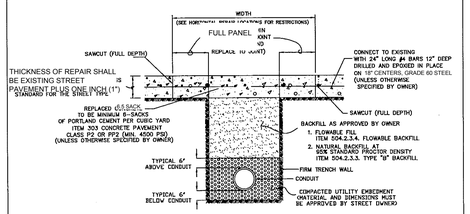
STORM SEWER PROFILES

Project No.	Scale
214000654	AS SHOWN

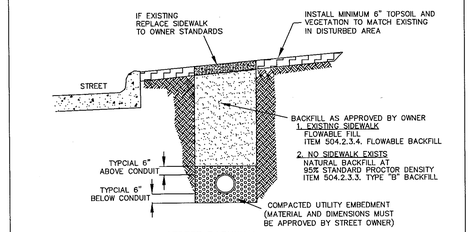
Revision	Drawing No.
8	C 05.06

Plotted: Jun 1, 2020, 2:2 PM by user: john - Saved: 6/1/2020 by user: john
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK ELEM ENG - RECORD SET.dwg

GENERAL NOTE: CHECK WITH STREET OWNER FOR SPECIFIC REQUIREMENTS NOT CONTAINED HEREIN

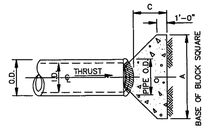


CONCRETE PAVEMENT
N.T.S.



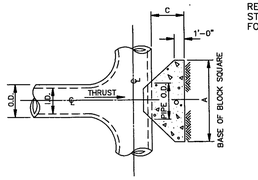
STREET PARKWAY
N.T.S.

PAVEMENT CUT AND REPAIR	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 402
CONCRETE AND PARKWAY		DATE OCT. '04 / STANDARD DRAWING NO. 3070A



PLAN OF PLUG THRUST BLOCK
N.T.S.

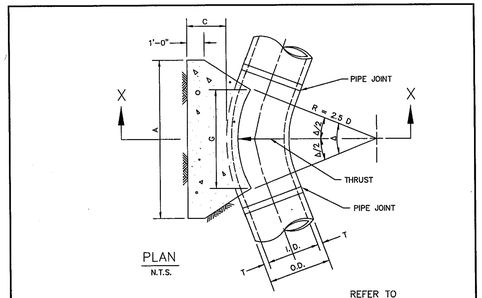
REFER TO STD. DWG. No. 4040 FOR GENERAL NOTES.



PLAN OF TEE THRUST BLOCK
N.T.S.

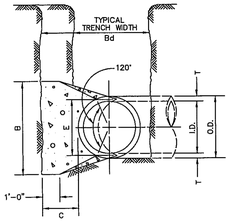
I.D. (IN.)	THRUST (TONS)	C (FT.)	EARTH A (FT.)	EARTH VOL. (C.Y.)	ROCK A (FT.)	ROCK VOL. (C.Y.)
4,6,8	5.1	1.5	2.5	0.3	2.0	0.2
10,12	11.3	1.5	3.5	0.6	2.5	0.3
16,18	25.5	2.0	5.5	1.6	4.0	0.9
20	31.5	2.0	6.0	1.9	4.0	0.9
24	45.2	2.5	7.0	3.1	5.0	1.7
30	53.0	3.0	7.5	4.1	5.5	2.4
36	76.3	4.0	9.0	7.3	6.5	4.2
42	104.0	4.5	10.5	11.0	7.5	6.2
48	136.0	5.0	12.0	15.8	8.5	8.7
54	172.0	5.5	13.5	21.4	9.5	11.9
60	212.0	6.0	15.0	28.4	10.5	15.7
66	257.0	6.5	16.5	36.8	11.5	20.5
72	305.0	7.5	17.5	47.2	12.5	27.2
78	358.0	8.0	19.0	58.9	13.5	33.7
84	416.0	8.5	20.5	72.3	14.5	41.2
90	477.0	9.0	22.0	87.7	15.5	49.7
96	543.0	9.5	23.5	104.8	16.5	61.0

HORIZONTAL THRUST BLOCK	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.4
AT TEES AND PLUGS		DATE OCT. '04 / STANDARD DRAWING NO. 4020



PLAN
N.T.S.

REFER TO STD. DWG. No. 4040 FOR GENERAL NOTES.



SECTION X–X
N.T.S.

HORIZONTAL THRUST BLOCK	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.4
AT PIPE BEND		DATE OCT. '04 / STANDARD DRAWING NO. 4010A

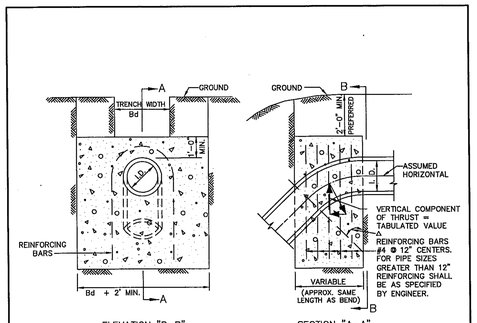
GENERAL NOTES FOR ALL THRUST BLOCKS:

1. CONCRETE FOR BLOCKING SHALL BE CLASS "B".
2. ALL CALCULATIONS ARE BASED ON INTERNAL PRESSURE OF 200 PSI FOR DUCTILE IRON, P.V.C., AND 150 PSI FOR CONCRETE PIPE.
3. VOLUMES OF THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED. THE CORRESPONDING WEIGHT OF THE CONCRETE (CLASS "B") IS EQUAL TO OR GREATER THAN THE VERTICAL COMPONENT OF THE THRUST ON THE VERTICAL BEND.
4. WALL THICKNESS (T) ASSUMED HERE FOR ESTIMATING PURPOSES ONLY.
5. POUR CONCRETE FOR BLOCK AGAINST UNDISTURBED EARTH.
6. DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHERE AND AS DIRECTED BY THE ENGINEER. THE VOLUME OF CONCRETE BLOCKING SHALL NOT BE LESS THAN SHOWN HERE.
7. THE SOIL BEARING PRESSURES ARE BASED ON 1000 LBS./S.F. IN SOIL AND 2000 LBS./S.F. IN ROCK.
8. USE POLYETHYLENE WRAP OR EQUAL BETWEEN CONCRETE AND BEND, TEE, OR PLUG TO PREVENT THE CONCRETE FROM STICKING TO IT.
9. CONCRETE SHALL NOT EXTEND BEYOND JOINTS.

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN: Chevalyn Armijo
DATE: 06/01/2020
Glenn Engineering Corporation

THRUST BLOCK	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.4
GENERAL NOTES		DATE OCT. '04 / STANDARD DRAWING NO. 4040

NCTCOG DETAILS HAVE BEEN MODIFIED BY THE CITY OF ROCKWALL. SEE NOTES DESIGNATED *MODIFICATIONS FOR THOSE REVISED.



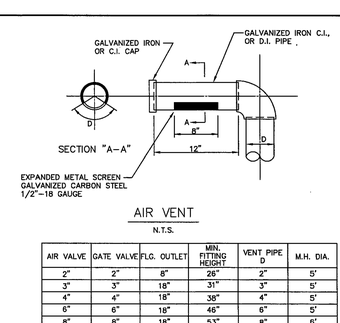
ELEVATION "B–B"
N.T.S.

SECTION "A–A"
N.T.S.

REFER TO STD. DWG. No. 4040 FOR GENERAL NOTES.

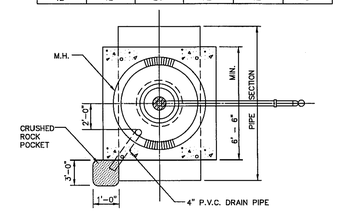
Δ	11.25° THRUST (TONS)	11.25° VOL. (C.Y.)	22.50° THRUST (TONS)	22.50° VOL. (C.Y.)	30° THRUST (TONS)	30° VOL. (C.Y.)	45° THRUST (TONS)	45° VOL. (C.Y.)	67.50° THRUST (TONS)	67.50° VOL. (C.Y.)	90° THRUST (TONS)	90° VOL. (C.Y.)	Δ I.D. (IN.)
4,6,8	1.0	0.5	2.0	1.0	2.5	1.3	3.6	1.8	4.6	2.3	5.0	2.5	4,6,8
10,12	2.2	1.1	4.3	2.2	5.7	2.8	8.0	4.0	10.5	5.2	11.3	5.7	10,12
16,18	5.0	2.5	9.7	4.9	12.7	6.4	18.0	9.0	23.5	11.8	25.5	12.7	16,18
20	6.1	3.1	12.0	6.0	15.7	7.9	22.2	11.1	29.2	14.5	31.4	15.7	20
24	8.2	4.4	17.3	8.7	22.6	11.3	32.0	16.0	41.8	20.9	45.2	22.6	24
30	10.5	5.2	20.3	10.1	26.5	13.3	37.5	18.8	49.0	24.5	53.1	26.5	30
36	14.9	7.5	29.2	14.6	38.2	19.1	54.0	27.0	70.5	35.3	76.4	38.2	36
42	20.3	10.1	39.8	19.9	52.0	26.0	73.5	36.7	96.0	48.0	104.0	52.0	42
48	26.5	13.2	51.9	26.0	67.9	33.9	96.0	48.0	126.0	62.7	136.0	67.9	48
54	33.5	16.8	65.7	32.9	85.9	42.9	122.0	60.7	159.0	79.4	172.0	85.9	54
60	41.4	20.7	81.2	40.6	106.0	53.0	150.0	75.0	196.0	98.0	212.0	106.0	60
66	50.1	25.0	98.2	49.1	128.0	64.2	182.0	90.7	237.0	119.0	257.0	128.0	66
72	59.6	29.8	117.0	58.4	153.0	76.3	216.0	108.0	282.0	141.0	305.0	153.0	72
78	69.9	35.0	137.0	68.6	179.0	90.0	254.0	127.0	331.0	166.0	358.0	179.0	78
84	81.1	40.5	159.0	79.5	208.0	104.0	294.0	147.0	384.0	192.0	416.0	208.0	84
90	93.1	46.5	183.0	91.3	239.0	119.0	337.0	169.0	441.0	221.0	477.0	239.0	90
96	106.0	53.0	208.0	104.0	272.0	136.0	384.0	192.0	502.0	251.0	543.0	272.0	96

VERTICAL THRUST BLOCK	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.4
AT PIPE BEND		DATE OCT. '04 / STANDARD DRAWING NO. 4030



AIR VENT
N.T.S.

AIR VALVE	GATE VALVE	FLG. OUTLET	MIN. FITTING HEIGHT	VENT PIPE D	M.H. DIA.
2"	2"	8"	26"	2"	5'
3"	3"	18"	31"	3"	5'
4"	4"	18"	38"	4"	5'
6"	6"	18"	46"	6"	5'
8"	8"	18"	53"	8"	6'
10"	10"	20"	62"	10"	6'
12"	12"	24"	72"	12"	6'



PLAN VIEW
N.T.S.

AIR RELEASE VALVE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.6
TYPE "2"		DATE OCT. '04 / STANDARD DRAWING NO. 4100B

I.D. (IN.)	T (IN.)	Δ = 11.25° C (FT.)	Δ = 22.50° C (FT.)	E (FT.)
4,6,8	0.4	1.5	1.5	0.9
10,12	0.5	1.5	1.5	1.2
16,18	0.6	1.5	1.5	1.6
20	0.7	1.5	1.5	1.8
24	0.9	1.5	1.5	2.1
30	2.9	1.5	1.9	2.6
36	4.5	1.5	2.3	3.3
42	5.0	1.8	2.6	3.8
48	5.5	2.0	3.0	4.3
54	6.0	2.3	3.4	4.8
60	6.5	2.5	3.8	5.3
66	6.8	2.8	4.1	5.7
72	7.5	3.0	4.5	6.3
78	7.5	3.3	4.9	6.7
84	8.0	3.5	5.3	7.2
90	8.5	3.8	5.6	7.7
96	9.0	4.0	6.0	8.2

I.D. (IN.)	Δ = 11.25° G (FT.)	Δ = 11.25° THRUST (TONS)	Δ = 11.25° EARTH A (FT.)	Δ = 11.25° EARTH B (FT.)	Δ = 11.25° EARTH VOL. (C.Y.)	Δ = 11.25° ROCK A (FT.)	Δ = 11.25° ROCK B (FT.)	Δ = 11.25° ROCK VOL. (C.Y.)	I.D. (IN.)	Δ = 22.50° G (FT.)	Δ = 22.50° THRUST (TONS)	Δ = 22.50° EARTH A (FT.)	Δ = 22.50° EARTH B (FT.)	Δ = 22.50° EARTH VOL. (C.Y.)	Δ = 22.50° ROCK A (FT.)	Δ = 22.50° ROCK B (FT.)	Δ = 22.50° ROCK VOL. (C.Y.)
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1
10,12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	10,12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1
16,18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	16,18	1.6	9.9	3.0	3.5	0.6	2.0	2.5	0.3
20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.3	20	1.8	12.3	3.5	3.5	0.7	2.0	3.0	0.4
24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.3	24	2.2	17.7	4.0	4.5	1.0	3.0	3.5	0.5
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	0.4	30	2.7	20.7	5.0	4.5	1.5	3.0	4.0	0.8
36	1.7	15.0	3.5	4.5	0.9	2.0	4.0	0.5	36	3.3	29.8	5.5	5.5	2.3	4.0	4.0	1.3
42	1.9	20.4	4.5	5.0	1.5	2.5	5.0	0.8	42	3.8	40.5	7.0	6.0	3.9	4.5	5.0	2.1
48	2.2	26.6	4.5	6.0	2.0	2.5	6.0	1.1	48	4.4	52.9	8.0	7.0	5.7	4.5	6.0	2.8
54	2.5	33.7	6.0	6.0	3.0	3.0	6.0	1.4	54	4.9	67.0	9.0	8.0	8.0	6.0	6.0	4.1
60	2.7	41.6	6.0	7.0	3.8	3.0	7.0	1.8	60	5.5	82.7	9.5	9.0	10.6	6.0	7.0	5.3
66	3.0	50.3	6.5	8.0	5.1	3.5	8.0	2.7	66	6.0	100.1	10.5	10.0	14.1	6.5	8.0	7.2
72	3.3	59.9	7.5	8.0	6.3	4.0	8.0	3.3	72	6.6	119.1	11.0	11.0	17.6	7.5	8.0	9.1
78	3.6	70.2	8.0	9.0	8.1	4.0	9.0	3.9	78	7.1	139.8	12.0	12.0	22.5	8.0	9.0	11.7
84	3.8	81.5	8.5	10.0	10.3	4.5	10.0	5.3	84	7.6	162.1	13.0	12.5	27.2	8.5	10.0	14.8
90	4.1	93.5	9.5	10.0	12.2	5.0	10.0	6.3	90	8.2	186.1	14.0	13.5	33.7	9.5	10.0	17.7
96	4.4	106.4	10.0	11.0	15.0	5.0	11.0	7.4	96	8.7	211.7	15.0	14.5	41.2	10.0	11.0	21.8

TABLES OF DIMENSIONS AND QUANTITIES

HORIZONTAL THRUST BLOCK	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.4
AT PIPE BEND		DATE OCT. '04 / STANDARD DRAWING NO. 4010B

I.D. (IN.)	Δ = 30° G (FT.)	Δ = 30° THRUST (TONS)	Δ = 30° EARTH A (FT.)	Δ = 30° EARTH B (FT.)	Δ = 30° EARTH VOL. (C.Y.)	Δ = 30° ROCK A (FT.)	Δ = 30° ROCK B (FT.)	Δ = 30° ROCK VOL. (C.Y.)	I.D. (IN.)	Δ = 45° G (FT.)	Δ = 45° THRUST (TONS)	Δ = 45° EARTH A (FT.)	Δ = 45° EARTH B (FT.)	Δ = 45° EARTH VOL. (C.Y.)	Δ = 45° ROCK A (FT.)	Δ = 45° ROCK B (FT.)	Δ = 45° ROCK VOL. (C.Y.)
4,6,8	1.0	2.6	2.0	1.5	0.2	1.0	1.5	0.1	4,6,8	1.5	3.9	2.0	2.0	0.2	1.5	1.5	0.1
10,12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2	10,12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3
16,18	2.2	13.2	3.5	4.0	0.8	2.5	3.0	0.4	16,18	3.2	19.5	4.5	4.5	1.2	3.0	3.5	0.6
20	2.4	16.3	4.5	4.0	1.0	3.0	3.0	0.5	20	3.6	24.1	5.5	4.5	1.5	3.5	3.5	0.7
24	2.9	23.4	6.0	4.0	1.4	3.5	3.5	0.7	24	4.3	34.6	8.0	4.5	2.3	4.5	4.0	1.1
30	3.6	27.5	6.5	5.0	1.9	3.5	4.0	0.9	30	5.4	40.6	8.5	5.0	3.2	5.5	4.0	1.6
36	4.4	39.5	7.0	6.0	3.4	4.5	4.5	1.6	36	6.5	58.5	10.0	6.0	5.3	6.5	4.5	2.6
42	5.1	53.8	8.0	7.0	5.1	5.5	5.0	2.5	42	7.5	79.6	11.5	7.0	8.1	8.0	5.0	4.2
48	5.8	70.3	9.0	8.0	7.4	6.0	6.0	3.7	48	8.6	104.0	13.0	8.0	11.9	9.0	6.0	6.3
54	6.5	89.0	10.0	9.0	10.3	7.0	6.5	5.3	54	9.7	131.5	15.0	9.0	17.1	10.5	6.5	8.9
60	7.3	110.0	11.0	10.0	13.9	7.5	7.5	7.3	60	10.7	162.4	16.5	10.0	23.1	11.0	7.5	12.0
66	8.0	132.9	12.5	11.0	18.9	8.5	8.0	9.6	66	11.8	196.5	18.0	11.0	30.1	12.0	8.5	16.2
72	8.7	158.2	13.5	12.0	24.0	9.0	9.0	12.3	72	12.9	233.9	19.5	12.0	38.6	14.0	8.5	20.7
78	9.4	185.6	14.5	13.0	30.0	10.0	9.5	15.6	78	13.9	274.5	21.5	13.0	49.8	14.5	9.5	25.9
84	10.1	215.3	15.5	14.0	37.1	10.5	10.5	19.5	84	15.0	318.4	23.0	14.0	61.2	15.5	10.5	32.6
90	10.9	247.1	16.5	15.0	45.0	11.5	11.0	23.9	90	16.1	365.5	24.5	15.0	74.5	17.5	10.5	39.8
96	11.6	281.2	18.0	16.0	55.5	12.5	11.5	28.9	96	17.1	415.6	26.0	16.0	89.5	18.5	11.5	48.5

I.D. (IN.)	Δ = 67.50° G (FT.)	Δ = 67.50° THRUST (TONS)	Δ = 67.50° EARTH A (FT.)	Δ = 67.50° EARTH B (FT.)	Δ = 67.50° EARTH VOL. (C.Y.)	Δ = 67.50° ROCK A (FT.)	Δ = 67.50° ROCK B (FT.)	Δ = 67.50° ROCK VOL. (C.Y.)	I.D. (IN.)	Δ = 90° G (FT.)	Δ = 90° THRUST (TONS)	Δ = 90° EARTH A (FT.)	Δ = 90° EARTH B (FT.)	Δ = 90° EARTH VOL. (C.Y.)	Δ = 90° ROCK A (FT.)	Δ = 90° ROCK B (FT.)	Δ = 90° ROCK VOL. (C.Y.)
4,6,8	2.1	5.6	3.0	2.0	0.3	2.0	1.5	0.2	4,6,8	2.7	7.1	5.0	1.5	0.4	2.0	2.0	0.2
10,12	3.1	12.6	5.5	2.5	0.8	3.5	2.0	0.4	10,12	4.0	16.0	6.5	2.5	1.0	3.5	2.5	0.5
16,18	4.7	28.3	7.5	4.0	1.9	5.5	3.0	0.9	16,18	6.0	36.0	9.0	4.0	2.4	4.5	4.0	1.0
20	5.2	34.9	9.0	4.0	2.3	5.5	3.5	1.2	20	6.6	44.4	10.0	4.5	3.1	6.0	4.0	1.5
24	6.2	50.3	11.5	4.5	3.5	6.5	4.0	1.6	24	7.9	64.0	14.5	4.5	5.0	8.0	4.0	2.1
30	7.8	58.9	12.0	5.0	4.8	7.5	4.0	2.2	30	9.9	75.0	15.0	5.0	6.5	8.0	4.0	3.3
36	9.4	84.9	14.5	6.0	8.2	9.5	4.5	3.8	36	11.9	108.0	18.0	6.0	11.4	12.0	4.5	5.3
42	10.9	115.5	17.0	7.0	12.8	11.0	5.5	5.3	42	13.9	147.0	21.0	7.0	17.8	14.0	5.5	8.7
48	12.5	150.9	19.0	8.0	18.4	13.0	6.0	9.2	48	15.9	192.0	24.0	8.0	26.2	16.0	6.0	12.4
54	14.0	191.0	21.5	9.0	26.0	15.0	6.5	12.9	54	17.9	243.0	27.0	9.0	36.9	18.0	7.0	18.1
60	15.6	235.8	24.0	10.0	35.6	16.0	7.5	17.6	60	19.9	299.8	30.0	10.0	50.3	20.0	7.5	24.0
66	17.1	285.3	26.0	11.0	46.0	18.0	8.0	23.0	66	21.8	362.8	33.0	11.0	66.2	22.0	8.5	32.5
72	18.7	339.5	28.5	12.0	57.8	19.0	9.0	28.4	72	23.8	431.8	35.0	12.0	85.6	24.0	9.0	41.0
78	20.2	398.5	31.0	13.0	75.7	21.0	9.5	37.4	78	25.7	506.7	39.0	13.0	108.2	26.0	10.0	53.2
84	21.8	462.1	33.5	14.0	94.7	22.0	10.5	46.5	84	27.7	587.7	42.0	14.0	134.4	28.0	10.5	64.8
90	23.3	530.5	35.5	15.0	114.4	24.5	11.0	58.2	90	29.0	674.6	45.0	15.0	164.9	30.0	11.5	81.2
96	24.9	603.6	38.0	16.0	138.9	25.5	12.0	70.0	96	31.6	767.5	48.0	16.0	199.0	32.0	12.0	95.1

TABLES OF DIMENSIONS AND QUANTITIES

HORIZONTAL THRUST BLOCK	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.4
AT PIPE BEND		DATE OCT. '04 / STANDARD DRAWING NO. 4010C

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Stantec

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5717 Legacy Drive Suite 250
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Consultants

GLENN ENGINEERING
T.B.P.E. FIRM REGISTRATION NO. F - 303
PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Issued

Permit-Seal

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

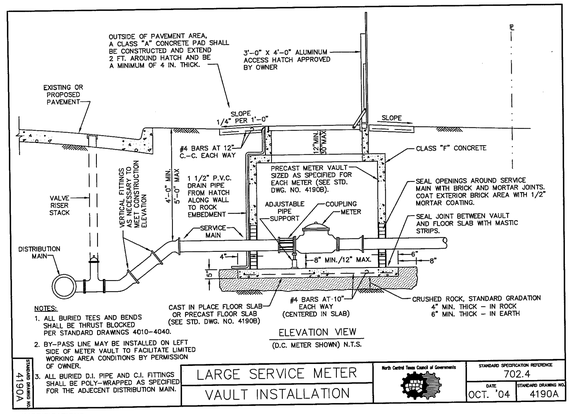
Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

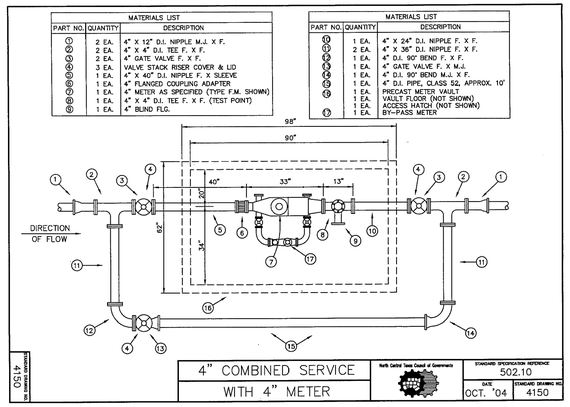
Title
WATER DETAILS 1

Project No.	Scale
214000654	AS SHOWN
Revision	Drawing No.
8	C05.07

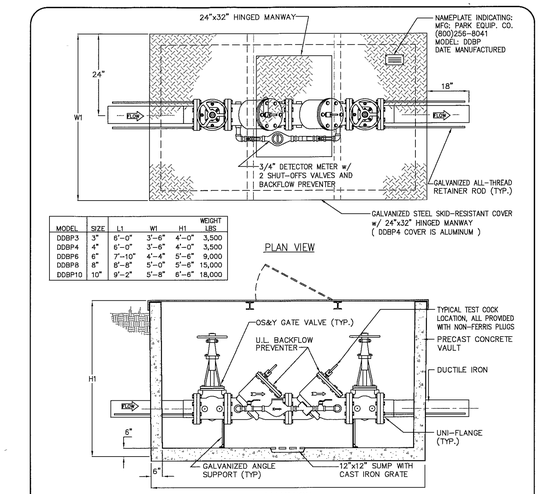
Plotted: Jun 1, 2020, 2:28 PM by user: john - Saved: 7/12/2019 by user: robert
R:\ROCKSIDSTONE CREEK ELEM\DIDSETSTONE CREEK DETAILS ONLY.dwg



*MODIFICATIONS
1. GATE VALVES TO BE INSTALLED ON BOTH SIDES OF METER
2. STRAINER SHALL BE INSTALLED BEFORE METER
3. DOUBLE CHECK VALVE TO BE INSTALLED AFTER METER
4. INSTALL BY-PASS LINE WITH VALVE



*MODIFICATIONS
1. INSTALL STRAINER BEFORE COUPLING ADAPTER AND METER
2. INSTALL TESTABLE DOUBLE CHECK VALVE AFTER FOUR (4) INCH BLIND FLANGE VALVE



© Park 2002

Specifications

CONCRETE : Class 1 concrete with design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

STEEL COVER: 1/4" steel skid-resistant floor plate welded to 3" angle frame with (2) 3"x2-3/8" I beam supports (300 PSF).

Engineering Data

The backflow assembly shall be factory assembled in vault & hydrostatically tested prior to delivery. Field excavation & preparation shall be complete prior to delivery. Pipe, valves and fittings of the assembly shall be approved by one or more of the following associations:

AWWA UL FCCC FM

PROJECT :
LOCATION:
CUSTOMER:
GEN.CONTR.:
ORDER # :
DATE:

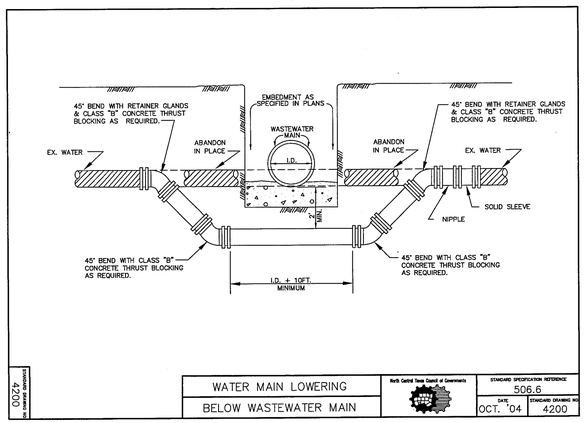
PARK ENVIRONMENTAL EQUIPMENT 888-611-PARK www.park-USA.com
"Expect the Best"

6" DOUBLE DETECTOR BACKFLOW PREVENTER ASSEMBLY FOR FIRE SERVICE

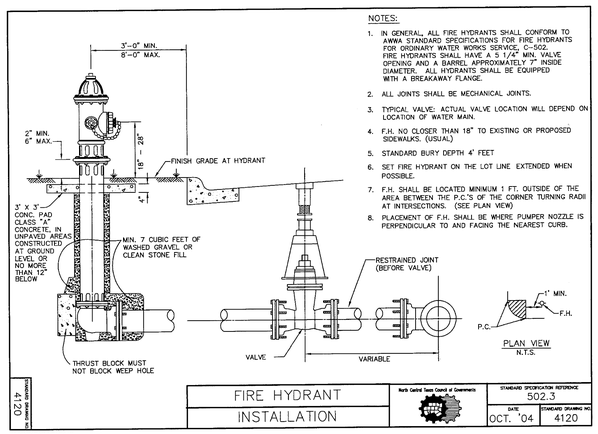
SCALE NONE | DWG. NO. DDBP-1 | REV. A
DATE 01/02

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN: Charalyn Armijo
DATE: 06/01/2020
Glenn Engineering Corporation

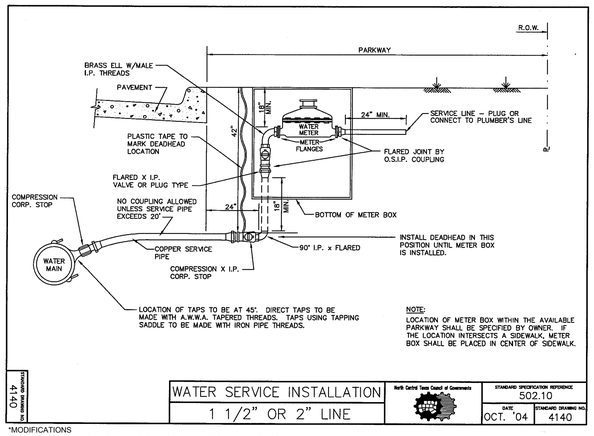
City of Rockwall



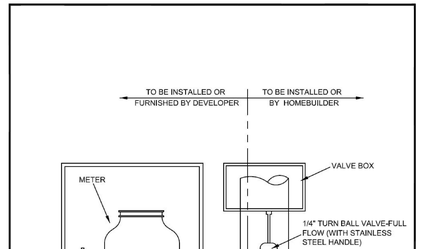
*MODIFICATIONS
1. THE CONCRETE ENCASEMENT SHALL ENCASE ENTIRE WASTEWATER MAIN
2. DEFLECT WATER LINE WHEN POSSIBLE

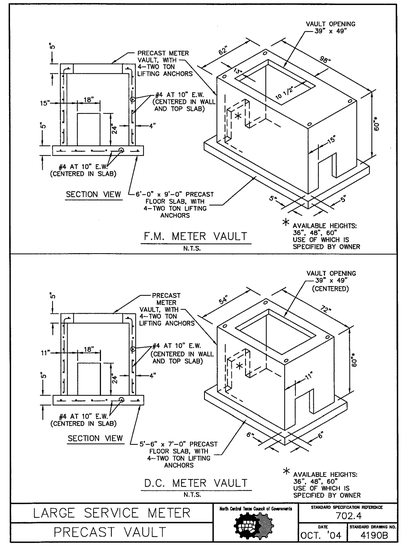


*MODIFICATIONS
1. ALL JOINTS ARE TO BE RESTRAINED. MEGA-LUG OR APPROVED EQUAL



*MODIFICATIONS
1. COPPER SERVICE LINE SHALL BE 1 1/2" OR 2" I.D. C.T.S. POLY TUBE SDR-9
2. METER BOX SHALL BE TWO FEET, SIX-INCHES (2'-6") FROM BACK OF CURB OR AS DIRECTED BY THE CITY
3. METER BOX SHALL BE EIGHTEEN (18) INCH DIAMETER BY FOURTEEN (14) INCH DEEP
4. BLUE EMS DISK SHALL BE SET AT MAIN LINE
5. SEE CITY DETAIL FOR SERVICE METER TAIL CONNECTION





NCTCOG DETAILS HAVE BEEN MODIFIED BY THE CITY OF ROCKWALL. SEE NOTES DESIGNATED *MODIFICATIONS FOR THOSE REVISED.

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

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PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

ROCKWALL INDEPENDENT SCHOOL DISTRICT

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
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3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Issued

Permit-Seal

STATE OF TEXAS MIKE GLENN 35059 REGISTERED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

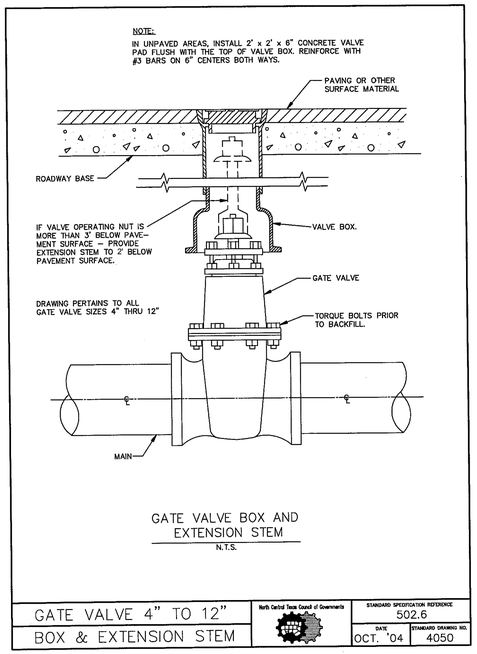
Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

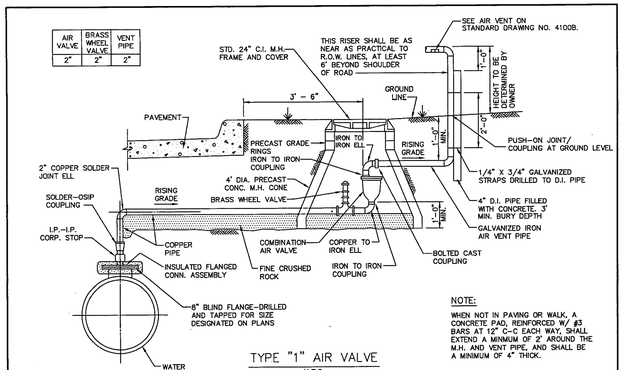
Title
WATER DETAILS 2

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 05.08

Plotted: Jun 1, 2020, 2:29 PM by user: john - Saved: 7/12/2019 by user: robert
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK DETAILS ONLY.dwg



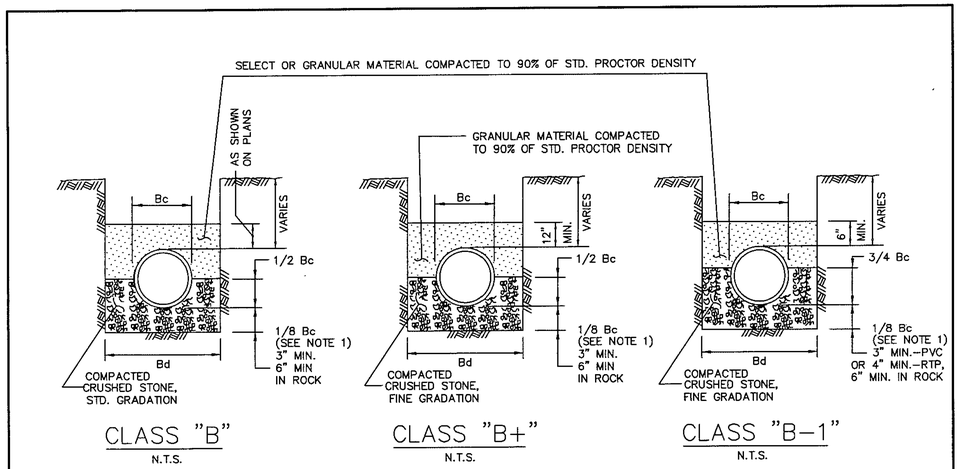
GATE VALVE 4" TO 12" BOX & EXTENSION STEM	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.6
		DATE OCT. '04 / STANDARD DRAWING NO. 4050



COMBINATION AIR VACUUM VALVE TYPE "1"	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.6
		DATE OCT. '04 / STANDARD DRAWING NO. 4090

STANDARD DRAWING NO. 4090

*MODIFICATIONS
1. USE SDR-9, NO COPPER
2. ONE (1) INCH PIPE, USE CC THREAD
3. GREATER THAN ONE (1) INCH PIPE, USE IRON PIPE THREAD



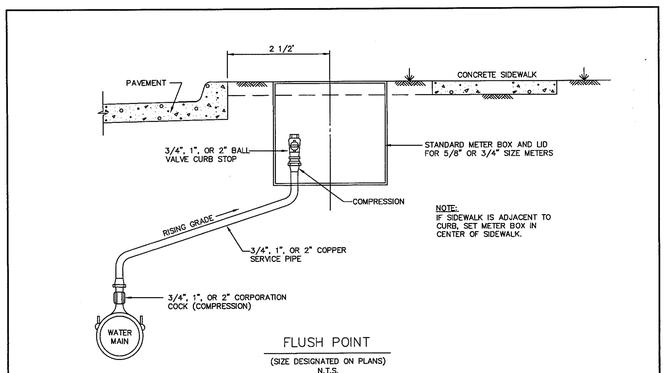
NOTES:

1. FOR MAINS 42" DIAMETER AND LARGER LARGER, 1/8 Bc SHALL BE TAKEN AS 6".
2. Bc = OUTSIDE DIAMETER OF PIPE
3. Bd = TRENCH WIDTH

STANDARD DRAWING NO. 3020

EMBEDMENT CLASS "B", "B+", & "B-1"	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 504.5
		DATE OCT. '04 / STANDARD DRAWING NO. 3020

*MODIFICATIONS
1. NO GRANULAR MATERIAL ABOVE ROCK OR STONE REPLACEMENT
2. CLASS "B" EMBEDMENT TO BE USED FOR RCP STORM SEWER PIPE
3. CLASS "B" AND "B-1" - SELECT NON-GRANULAR MATERIAL TO BE COMPACTED TO 95% STANDARD PROCTOR. SELECT NON-GRANULAR MATERIAL ABOVE EMBEDMENT
4. CLASS "B+" - NON-GRANULAR MATERIAL TO BE COMPACTED TO 95% STANDARD PROCTOR



FLUSH POINT INSTALLATION TYPE "1"	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.10
		DATE OCT. '04 / STANDARD DRAWING NO. 4110

STANDARD DRAWING NO. 4110

*MODIFICATIONS
1. SERVICE PIPE TO BE SDR 9, NO COPPER

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RECORD DRAWING
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SIGN:
DATE: 06/01/2020
Glenn Engineering Corporation

Stantec
Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
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4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

ROCKWALL INDEPENDENT SCHOOL DISTRICT

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Revision	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01
Issued	By	Appd	YYYY.MM.DD

Permit-Seal

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Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
WATER DETAILS 3

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 05.09

Plotted: Jun 1, 2020, 2:29 PM by user: john - Saved: 7/12/2019 by user: robert
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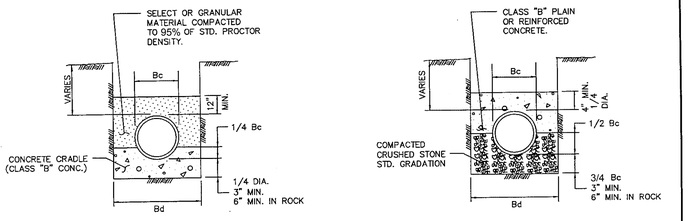


CLASS "A"

CLASS "B" CONCRETE CRADLE
PLAIN CONC. LF 2.8
REINF. CONC. LF 3.4 P=0.4%

N.T.S.

CLASS "A-1"

CLASS "B" CONCRETE CAP
PLAIN CONC. LF 2.8
REINF. CONC. LF 3.4 P=0.4%
REINF. CONC. LF 4.8 P=1.0%

N.T.S.

NOTES:
1. LF. = LOAD FACTOR TO BE USED TO DETERMINE 3 EDGE BEARING BASED ON TYPE OF EMBEDMENT.
2. FREE-FALL OF CONCRETE NOT TO EXCEED 5 FT. MAXIMUM.
3. P = Rho FOR STEEL %
4. Bc = OUTSIDE DIAMETER OF PIPE
5. Bd. = TRENCH WIDTH

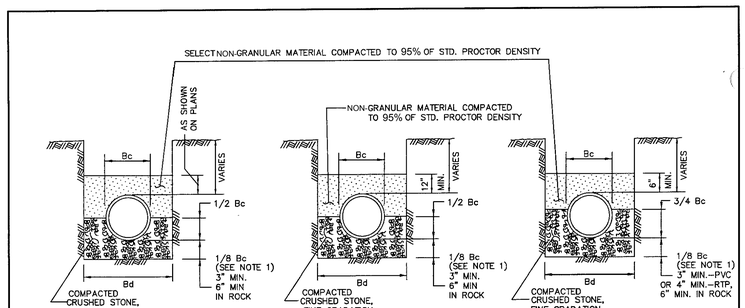
*MODIFICATION: MATERIAL ABOVE CRUSHED STONE TO BE NON-GRANULAR CRUSHED MATERIAL

STANDING DRAWING NO. 3010

EMBEDMENT
CLASS "A" & "A-1"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 504.5
DATE OCT. '04
STANDARD DRAWING NO. 3010



CLASS "B"

N.T.S.

CLASS "B+"

N.T.S.

CLASS "B-1"

N.T.S.

NOTES:
1. FOR MAINS 42" DIAMETER AND LARGER LARGER, 1/8 Bc SHALL BE TAKEN AS 6".
2. Bc = OUTSIDE DIAMETER OF PIPE
3. Bd = TRENCH WIDTH

*MODIFICATION: CLASS "B" EMBEDMENT TO BE USED FOR RCP STORM PIPE

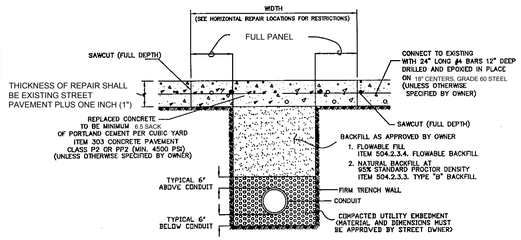
STANDING DRAWING NO. 3020

EMBEDMENT
CLASS "B", "B+", & "B-1"

North Central Texas Council of Governments

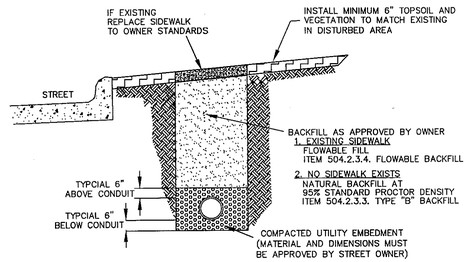
STANDARD SPECIFICATION REFERENCE 504.5
DATE OCT. '04
STANDARD DRAWING NO. 3020

GENERAL NOTE: CHECK WITH STREET OWNER FOR SPECIFIC REQUIREMENTS NOT CONTAINED HEREIN



CONCRETE PAVEMENT

N.T.S.



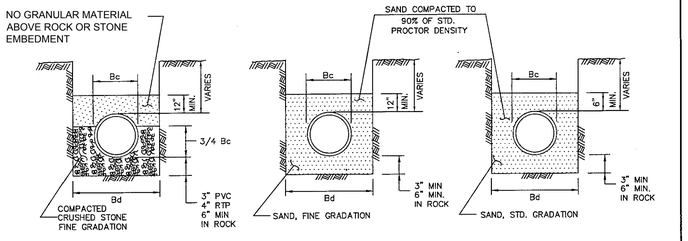
STREET PARKWAY

N.T.S.

PAVEMENT CUT AND REPAIR
CONCRETE AND PARKWAY

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 402
DATE OCT. '04
STANDARD DRAWING NO. 3070A



CLASS "B-2"

N.T.S.

CLASS "B-3"

N.T.S.

CLASS "B-4"

N.T.S.

NOTES:
1. Bc = OUTSIDE DIAMETER OF PIPE
2. Bd = TRENCH WIDTH

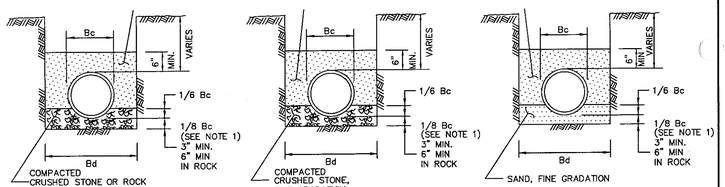
*MODIFICATION: CLASS "B-3" EMBEDMENT TO BE USED FOR PVC WATER PIPE

STANDING DRAWING NO. 3030

EMBEDMENT
CLASS "B-2", "B-3", & "B-4"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 504.5
DATE OCT. '04
STANDARD DRAWING NO. 3030



CLASS "C"

N.T.S.

CLASS "C+"

N.T.S.

CLASS "C-1"

N.T.S.

NOTES:
1. FOR MAINS 42" DIAMETER AND LARGER, 1/8 Bc SHALL BE TAKEN AS 6".
2. Bc = OUTSIDE DIAMETER OF PIPE
3. Bd = TRENCH WIDTH

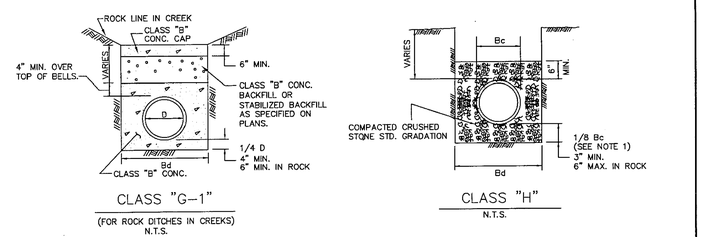
*MODIFICATIONS
1. NO GRANULAR MATERIAL ABOVE ROCK OR STONE EMBEDMENT
2. CLASS "C" AND "C+" - COMPACT NON-GRANULAR MATERIAL TO 95% STANDARD PROCTOR
3. CLASS "C-1" - COMPACT GRANULAR MATERIAL TO 95% STANDARD PROCTOR

STANDING DRAWING NO. 3040

EMBEDMENT
CLASS "C", "C+", & "C-1"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 504.5
DATE OCT. '04
STANDARD DRAWING NO. 3040



CLASS "G-1"

(FOR ROCK DITCHES IN CREEKS)

N.T.S.

CLASS "H"

N.T.S.

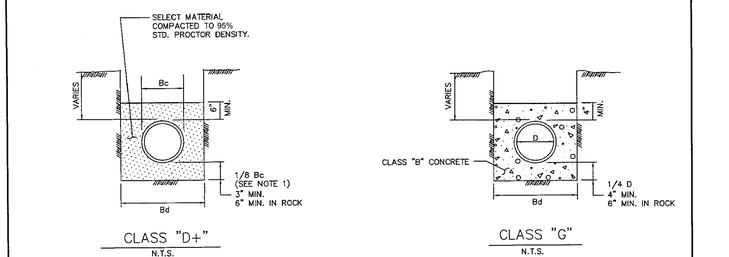
NOTES:
1. FOR MAINS 42" DIAMETER AND LARGER, 1/8 Bc SHALL BE TAKEN AS 6".
2. Bd = TRENCH WIDTH
3. Bc = OUTSIDE DIAMETER OF PIPE
4. D = INSIDE DIAMETER OF PIPE

STANDING DRAWING NO. 3060

EMBEDMENT
CLASS "G-1" & "H"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 504.5
DATE OCT. '04
STANDARD DRAWING NO. 3060



CLASS "D+"

N.T.S.

CLASS "G"

N.T.S.

NOTES:
1. FOR MAINS 42" DIAMETER AND LARGER, 1/8 Bc SHALL BE TAKEN AS 6".
2. Bc = OUTSIDE DIAMETER OF PIPE
3. Bd = TRENCH WIDTH
4. D = INSIDE DIAMETER OF PIPE

STANDING DRAWING NO. 3050

EMBEDMENT
CLASS "D+" & "G"

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE 504.5
DATE OCT. '04
STANDARD DRAWING NO. 3050

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN: Charalyn Armijo
DATE: 06/01/2020
Glenn Engineering Corporation

NCTCOG DETAILS HAVE BEEN MODIFIED BY THE CITY OF ROCKWALL. SEE NOTES DESIGNATED *MODIFICATIONS FOR THOSE REVISED.

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

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Consultants

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PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
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4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02
Issued	**By**	**Appd**	**YYYY.MM.DD**
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

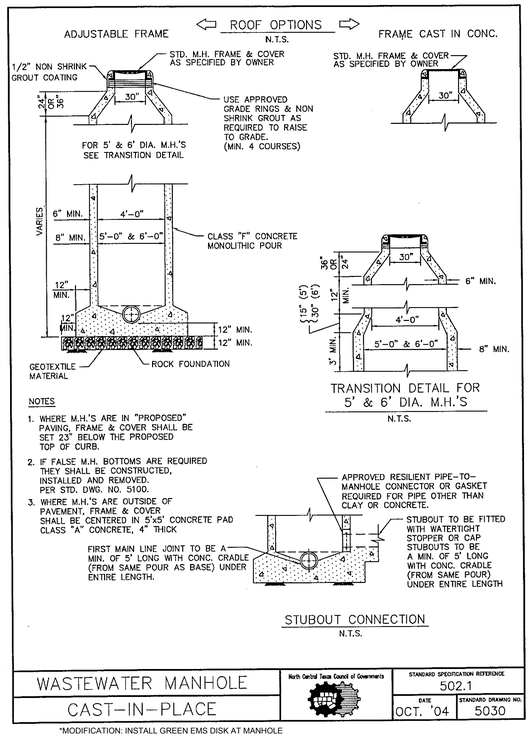
Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
EMBEDMENT DETAILS

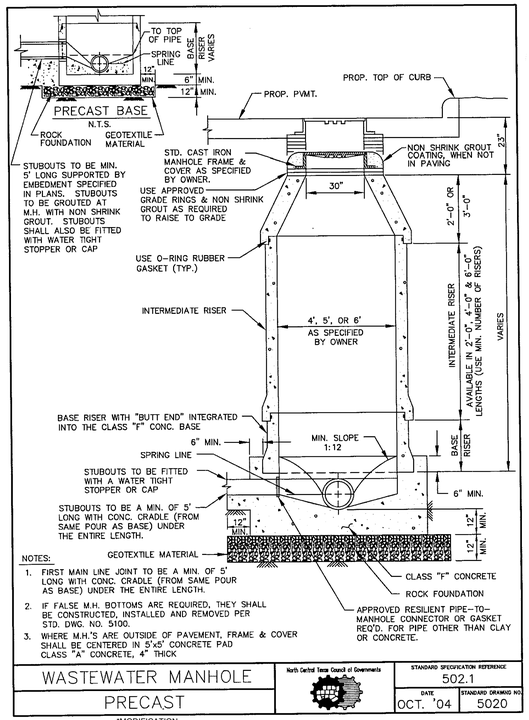
Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 05.10

Plotted: Jun 1, 2020, 2:29 PM by user: john - Saved: 7/12/2019 by user: robert
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK DETAILS ONLY.dwg



WASTEWATER MANHOLE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.1
CAST-IN-PLACE		DATE OCT. '04 / STANDARD DRAWING NO. 5030

*MODIFICATION: INSTALL GREEN EMS DISK AT MANHOLE

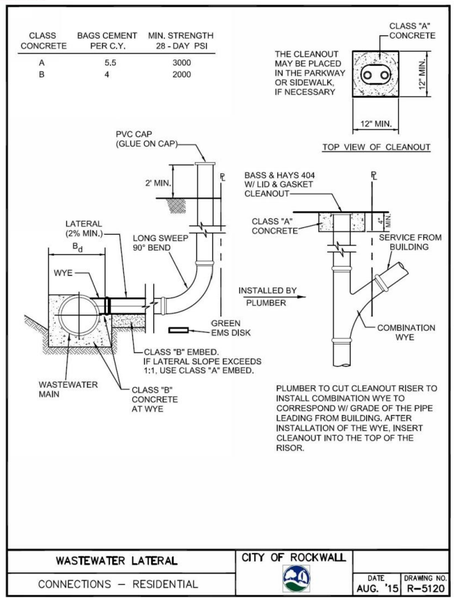


WASTEWATER MANHOLE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.1
PRECAST		DATE OCT. '04 / STANDARD DRAWING NO. 5020

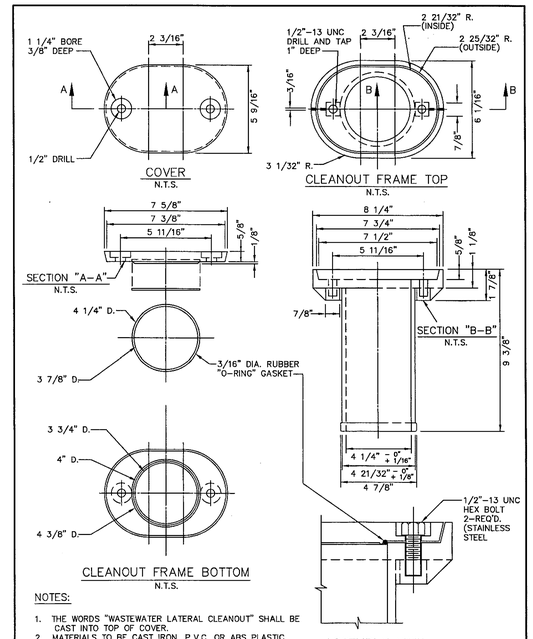
*MODIFICATION
1. INSTALL GREEN EMS DISK AT MANHOLE
2. LIP TO BE PRECAST

City of Rockwall
The New Horizon

CLASS CONCRETE	BAGS CEMENT PER C.Y.	MIN. STRENGTH 28 - DAY PSI
A	5.5	3000
B	4	2000

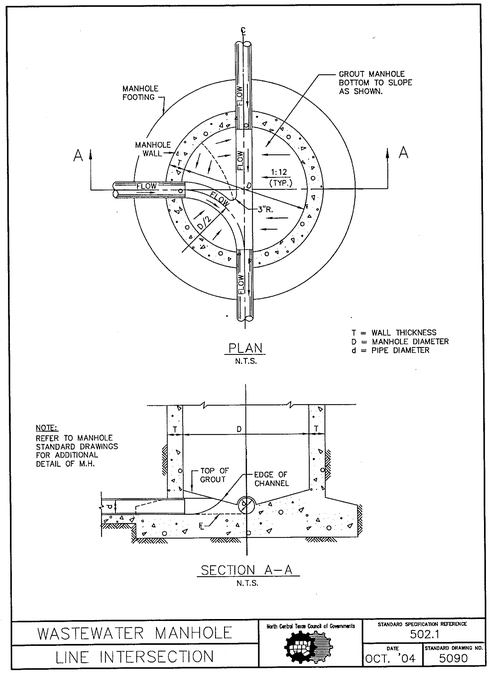


WASTEWATER LATERAL	CITY OF ROCKWALL	
CONNECTIONS – RESIDENTIAL		DATE AUG. '15 / DRAWING NO. R-5120

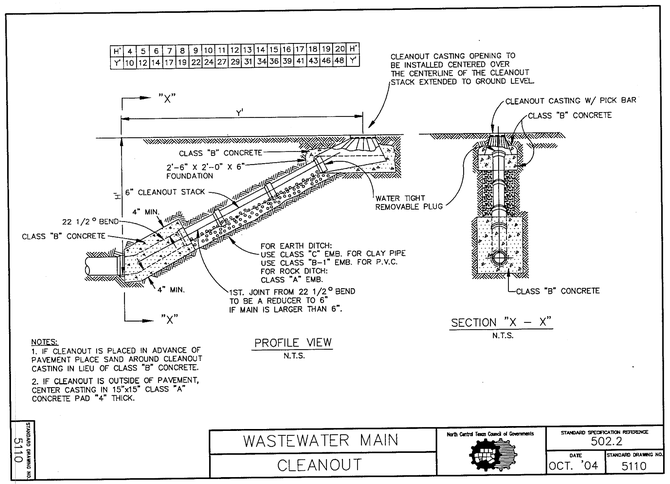


NOTES:
1. THE WORDS "WASTEWATER LATERAL CLEANOUT" SHALL BE CAST INTO TOP OF COVER.
2. MATERIALS TO BE CAST IRON, P.V.C. OR ABS PLASTIC.

WASTEWATER LATERAL	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.10
CLEANOUT FRAME & COVER		DATE OCT. '04 / STANDARD DRAWING NO. 5140



WASTEWATER MANHOLE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.1
LINE INTERSECTION		DATE OCT. '04 / STANDARD DRAWING NO. 5090

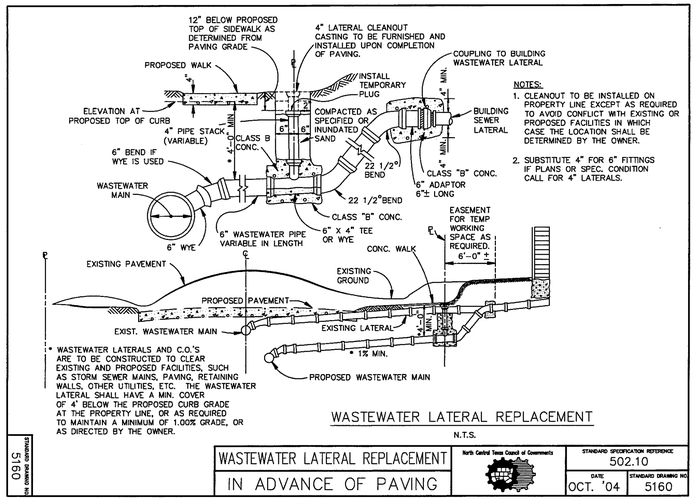


NOTES:
1. IF CLEANOUT IS PLACED IN ADVANCE OF PAVEMENT PLACE SAND AROUND CLEANOUT CASTING IN LIEU OF CLASS "B" CONCRETE.
2. IF CLEANOUT IS OUTSIDE OF PAVEMENT, CENTER CASTING IN 15"x15" CLASS "A" CONCRETE PAD "4" THICK.

STANDARD DRAWING NO. 5110

WASTEWATER MAIN	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.2
CLEANOUT		DATE OCT. '04 / STANDARD DRAWING NO. 5110

*MODIFICATION: PVC PIPE ONLY. NO CLAY PIPE



STANDARD DRAWING NO. 5160

WASTEWATER LATERAL REPLACEMENT IN ADVANCE OF PAVING	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.10
		DATE OCT. '04 / STANDARD DRAWING NO. 5160

*MODIFICATION
1. INSTALL GREEN EMS DISK AT PROPERTY LINE
2. WYES ONLY. NO TEES

NCTCOG DETAILS HAVE BEEN MODIFIED BY THE CITY OF ROCKWALL. SEE NOTES DESIGNATED *MODIFICATIONS FOR THOSE REVISED.

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN:
DATE: 06/01/2020
Glenn Engineering Corporation

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

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PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

ROCKWALL INDEPENDENT SCHOOL DISTRICT

Revision	By	Appd	
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
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3 - CITY COMMENTS	RAH	CMG	2019.04.30
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Issued	By	Appd	
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

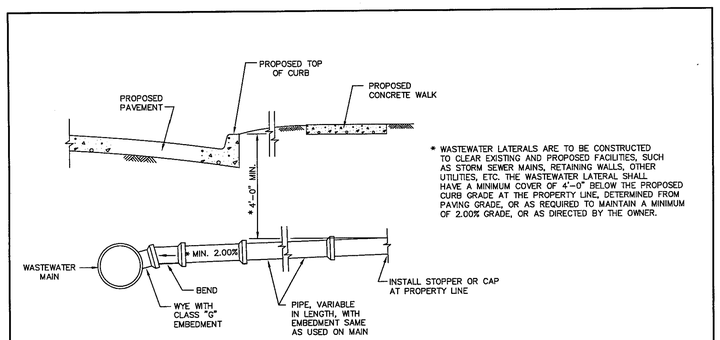
Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
SANITARY SEWER DETAILS

Project No.	Scale
214000654	AS SHOWN

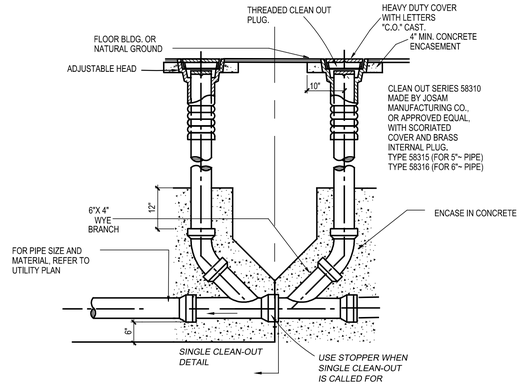
Revision	Drawing No.
8	C 05.11



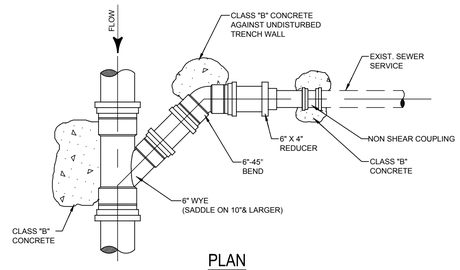
WASTEWATER LATERAL STUBOUT
(FOR FUTURE CONNECTION, 4" OR 6" AS SPECIFIED)
N.T.S.

STANDARD DRAWING NO. 5150	WASTEWATER LATERAL STUBOUT IN ADVANCE OF PAVING	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.10	DATE OCT. '04	STANDARD DRAWING NO. 5150

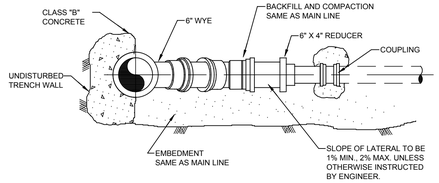
*MODIFICATION: INSTALL GREEN EMS DISK AT END OF LATERAL



SANITARY SEWER DOUBLE CLEAN-OUT
SINGLE / DOUBLE



PLAN



SECTION

DETAIL
SANITARY SEWER
LATERAL
3/4"=1'-0"

NCTCOG DETAILS HAVE BEEN MODIFIED BY THE CITY OF ROCKWALL. SEE NOTES DESIGNATED *MODIFICATIONS FOR THOSE REVISED.

RECORD DRAWING
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SIGN: Chevalyn Armijo
DATE: 06/01/2020
Glenn Engineering Corporation

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

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Client/Project
Rockwall ISD

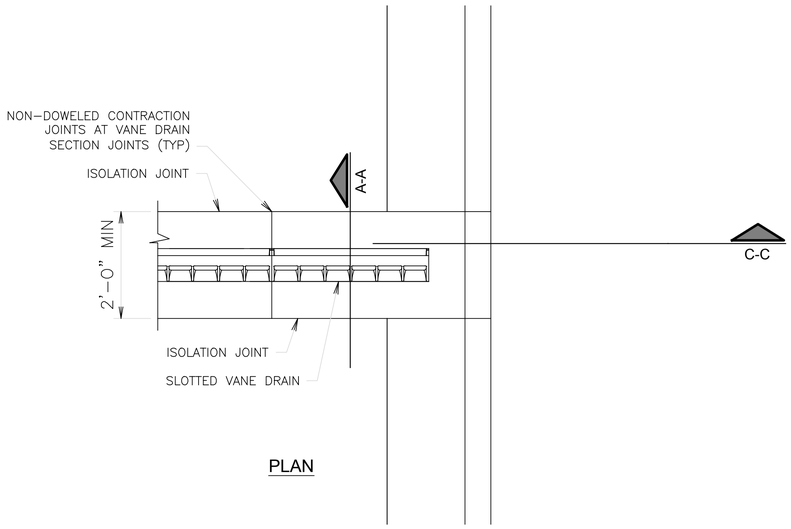
Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

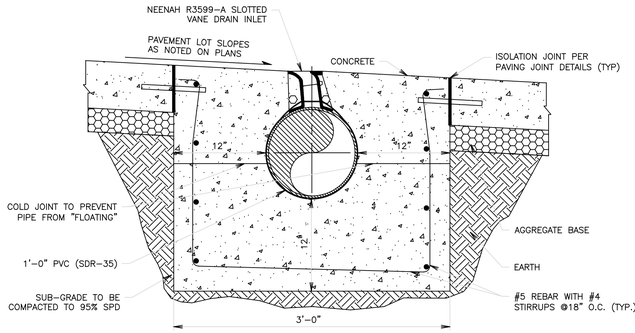
Title
SANITARY SEWER DETAILS

Project No.	Scale
214000654	AS SHOWN

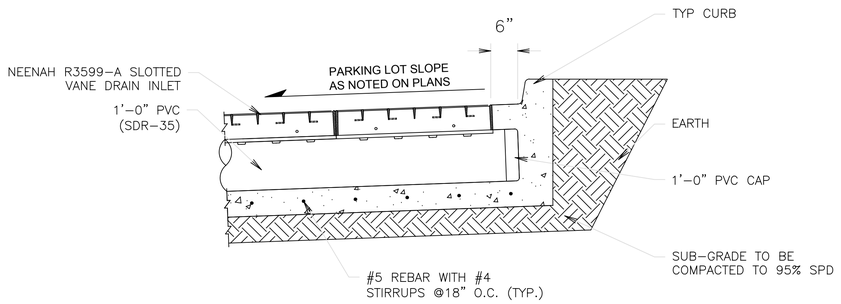
Revision: 8
Drawing No.: C 05.11A



PLAN

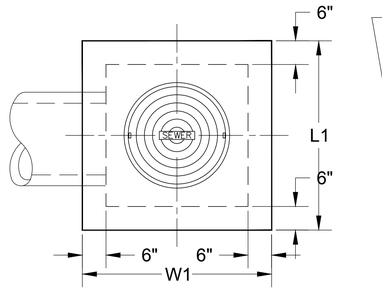


SECTION A-A

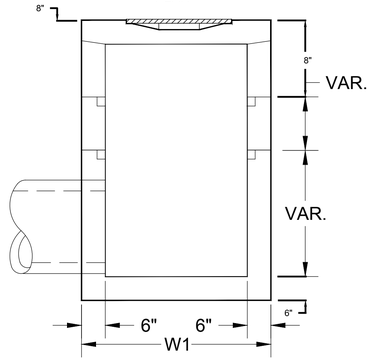


SECTION C-C

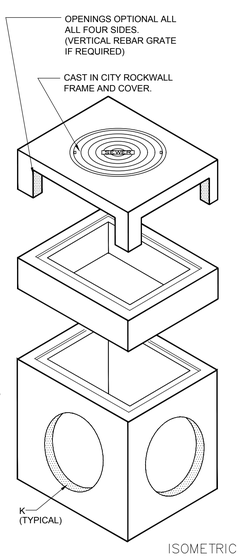
SLOTTED VANE DRAIN DETAIL



PLAN



SECTION



ISOMETRIC

TYPE	L1	W1	K
E-3'	4'-0"	4'-0"	32"
E-4'	5'-0"	5'-0"	48"

SPECIFICATIONS

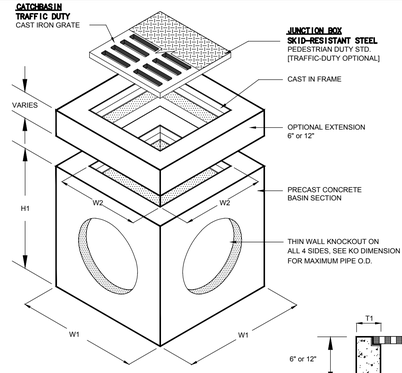
CONCRETE : Class 1 concrete with of design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth. Rated for H-20 Loading.

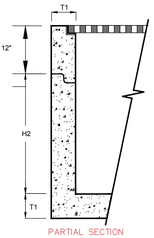
REINFORCEMENT: Grade 60 reinforced. No. 4 steel rebar to conform to ASTM A615 on required centers or equal.

C.I. CASTINGS: Cast iron frames and grates are manufactured of grey cast iron conforming to ASTM A48–76 Class 30.

"Y" INLET DETAIL

NOT TO SCALE





PARTIAL SECTION

MODEL #		DIMENSIONS						
CATCH BASIN [1]	JUNCTION BOX [2]	W1	W2	H1	H2	T1	KO	GRATE SIZE	WEIGHT LBS
CB12	JB12	15"	15"	21"	18"	2"	10"	12"x12"x1"	180
CB18	JB18	24"	16"	34"	30"	4"	15"	18"x18"x11"	1,000
CB20	JB20	26"	18"	34"	30"	4"	17"	20"x20"x11"	1,335
CB24	JB24	32"	22"	41"	36"	5"	22"	24"x24"x2"	2,245
CB27	JB27	37"	25"	42"	36"	6"	24"	27"x27"x2"	2,875
CB30	JB30	42"	30"	42"	36"	6"	30"	32"x32"x2"	3,675
CB36	JB36	48"	36"	54"	48"	6"	32"	38"x38"x2"	4,585

1. CB12 CATCHBASIN IS RATED FOR PEDESTRIAN LOADING. ALL OTHERS ARE TRAFFIC DUTY.
2. ALL JUNCTION BOXES SHALL BE STANDARD TRAFFIC DUTY.

PRECAST CONCRETE CATCHBASIN / JUNCTION BOX 18" THRU 36"

NOT TO SCALE

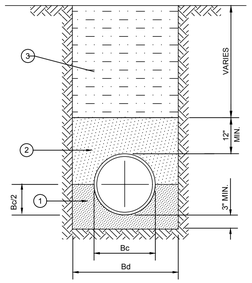
SPECIFICATIONS

CONCRETE : Class 1 concrete with of design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

C.I. CASTINGS: Cast iron frames and grates are manufactured of grey cast iron conforming to ASTM A48–76 Class 30.

ALL AREA DRAINS SHALL BE CB24 (24" X24")

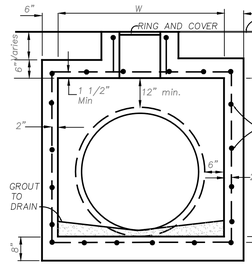


1. FINE GRADATION CRUSHED STONE - TOP LAYER IS TO BE PLACED TO GRADE TO PROVIDE UNIFORM SUPPORT OF PIPE BARREL. EXCAVATE BELL HOLES.
2. SELECT MATERIAL FREE OF ROCKS, CLUMPS OR DEBRIS LARGER THAN 6" IN GREATEST DIMENSION. COMPACT TO 95% STANDARD PROCTOR DENSITY. UNDER STRUCTURES, ROADWAYS AND PAVEMENT. USE NON-GRANULAR MATERIAL COMPACTED TO 95% STANDARD PROCTOR DENSITY. (NO SAND PERMITTED ABOVE STONE)
3. SELECT MATERIAL FREE OF ROCKS, CLUMPS OR DEBRIS LARGER THAN 6" IN GREATEST DIMENSION. COMPACT TO 95% STANDARD PROCTOR DENSITY. UNDER STRUCTURES, ROADWAYS AND PAVEMENT, COMPACT TO 95% STANDARD PROCTOR DENSITY.

CLASS "B+" EMBEDMENT

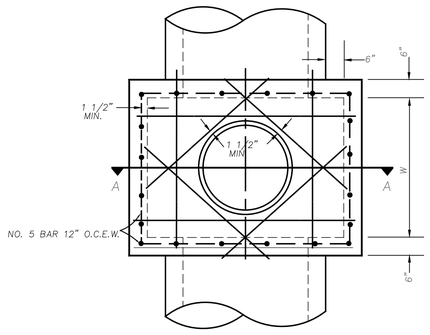
NOT TO SCALE

ROOF DRAIN LINES AND STORM SEWER LINES



SECTION A–A

Not To Scale



STORM SEWER JUNCTION BOX DETAIL

Not To Scale

NOTES:
1. *JUNCTION BOX FLOWLINE TO MATCH STORM SEWER FLOWLINE.*
2. *ALL STEEL TO BE GRADE 60, NO. 5 BAR 12" O.C.E.W. EACH FACE.*
3. *CONCRETE TO BE 4200 PSI, (6 1/2 SACK) 28 DAYS.*
4. *GROUT FLOOR TO DRAIN.*
5. *RING & COVER FOR JB4 TO BE NEENAH FOUNDRY NO. R–1915–D OR APPROVED EQUIVALENT.*
7. *RISER TO BE MONOLITHIC WITH JUNCTION BOX.*

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.

SIGN: Charalyn Armijo

DATE: 06/01/2020

Glenn Engineering Corporation

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Stantec

Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
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PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

ROCKWALL INDEPENDENT SCHOOL DISTRICT

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02

Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
STORM DETAILS 1

Project No. 214000654

Scale AS SHOWN

Revision 8

Drawing No. C 05.12

Plotted: Jun 1, 2020, 2:31 PM by user: john - Saved: 7/12/2019 by user: robert
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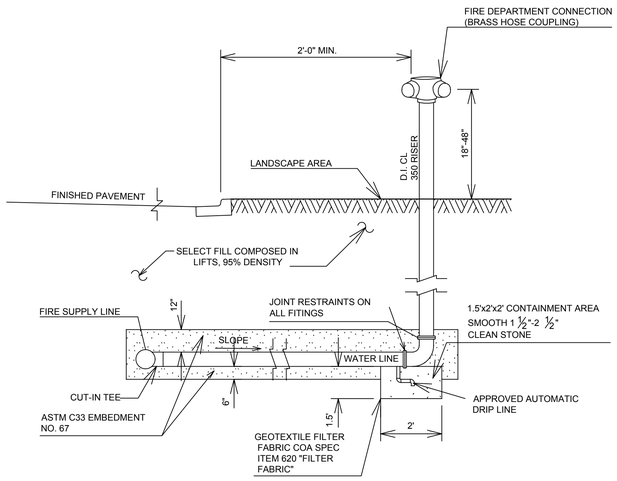


NOTES:
1. THE PIPING BETWEEN THE CHECKVALVE AND THE OUTSIDE HOSE COUPLING SHALL BE EQUIPPED WITH AN APPROVED AUTOMATIC DRIP ON THE LOWEST PORTION OF THE PIPING. UNDERGROUND PIPE SHALL BE SLOPED FOR DRAINAGE.

2. PIPE SHALL BE SIZED IN ACCORDANCE WITH NFPA 13.

3. FIRE DEPARTMENT CONNECTION SHALL CONSIST OF TWO 2 1/2" CONNECTIONS USING NST INTERNAL THREADED SWIVEL FITTINGS.

4. WATER PIPE MAY BE CONNECTED DIRECTLY TO FIRE SUPPLY LINE IN LIEU OF DIRECTLY INSIDE THE BUILDING. (SEE DETAIL)

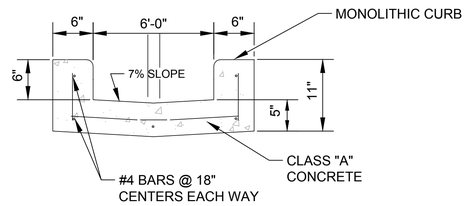
5. GEOTEXTILE CONTAINMENT AREA MAY BE SUBSTITUTED WITH CONCRETE VAULT. DRIP LINE MUST BE PROTECTED FROM DIRT AND DEBRIS TO ENSURE LINE DOES NOT CLOG.

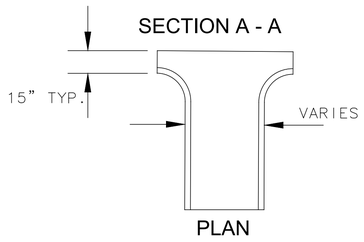
FIRE DEPARTMENT CONNECTION

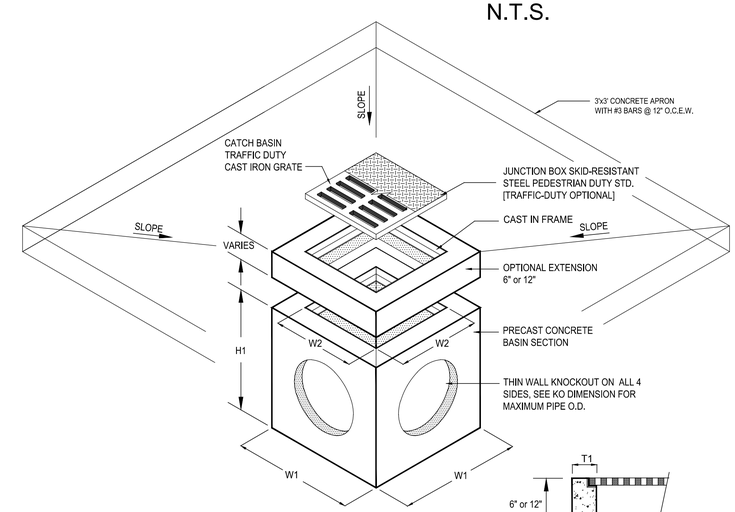
N.T.S.

NOTES:

1. FLUME NEEDS TO BE FLARED AT ENTRANCE ONLY FOR HYDRAULIC PURPOSES.







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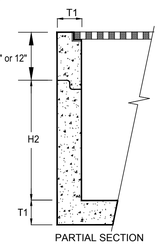


PRIVATE PRECAST CONCRETE CATCHBASIN /
JUNCTION BOX 18" THRU 36"
NOT TO SCALE

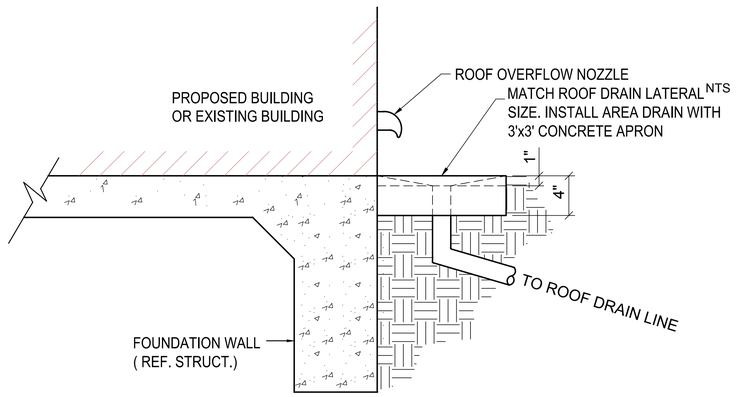
ALL AREA DRAINS
SHALL BE CB24 (24" X24")

SPECIFICATIONS

CONCRETE : Class 1 concrete with of design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

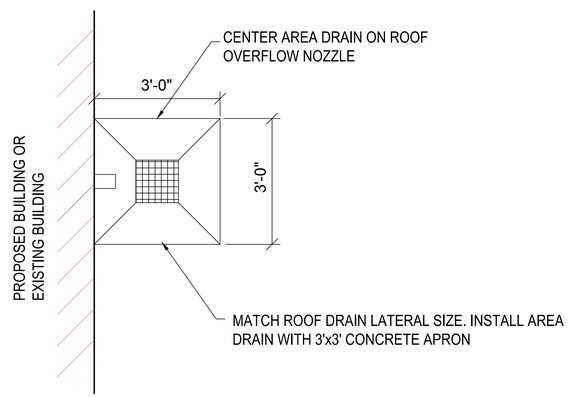
REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

C.I. CASTINGS: Cast iron frames and grates are manufactured of grey cast iron conforming to ASTM A48-76 Class 30.



SECTION

NOTE: CONTRACTOR TO INSTALL AT ALL ROOF DRAIN OVERFLOW LOCATIONS



PLAN

ROOF DRAIN OVERFLOW NOZZLE DETAILS OUTSIDE FOUNDATION WALL

NTS

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.

SIGN: Cheralyn Armijo

DATE: 06/01/2020

Glenn Engineering Corporation

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Stantec

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Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
PRIVATE STORM DETAILS 2

Project No. 214000654

Scale AS SHOWN

Revision 8

Drawing No. C 05.13

Plotted: Jun 1, 2020, 2:31 PM by user: john - Saved: 7/12/2019 by user: robert
R:\ROCKISD\STONE CREEK ELEM\BID\SETTSTONE CREEK DETAILS ONLY.dwg

RECOMMENDATIONS FOR INSTALLATION AND USE OF SOILS AND AGGREGATES FOR FOUNDATION, EMBEDMENT AND BACKFILL

	SOIL CLASS			
	CLASS IA	CLASS IB	CLASS II	CLASS III
GENERAL RECOMMENDATIONS AND RESTRICTIONS	DO NOTE USE WHERE CONDITIONS MAY CAUSE MIGRATION OF FINES FROM ADJACENT SOIL AND LOSS OF PIPE SUPPORT. SUITABLE FOR USE AS A DRAINAGE BLANKET AND UNDERDRAIN IN ROCK CUTS WHERE ADJACENT MATERIAL IS SUITABLY GRADED	PROCESS MATERIAL AS REQUIRED TO OBTAIN GRADATION WHICH WILL MINIMIZE MIGRATION OF ADJACENT MATERIALS SUITABLE FOR USE AS DRAINAGE BLANKET AND UNDERDRAIN.	WHERE HYDRAULIC GRADIENT EXISTS CHECK GRADATION TO MINIMIZE MIGRATION. "CLEAN" GROUPS SUITABLE FOR USE AS DRAINAGE BLANKET AND UNDERDRAIN.	DO NOT USE WHERE WATER CONDITIONS IN TRENCH MAY CAUSE INSTABILITY
FOUNDATION	SUITABLE AS FOUNDATION AND FOR REPLACING OVER-EXCAVATED AND UNSTABLE TRENCH BOTTOM AS RESTRICTED ABOVE. INSTALL AND COMPACT IN 6-IN. MAXIMUM LAYERS.	SUITABLE AS FOUNDATION AND FOR REPLACING OVER-EXCAVATED AND UNSTABLE TRENCH BOTTOM. INSTALL AND COMPACT IN 6-IN. MAXIMUM LAYERS.	SUITABLE AS FOUNDATION AND FOR REPLACING OVER-EXCAVATED AND UNSTABLE TRENCH BOTTOM AS RESTRICTED ABOVE. INSTALL AND COMPACT IN 6-IN. MAXIMUM LAYERS.	SUITABLE AS FOUNDATION AND FOR REPLACING OVER-EXCAVATED TRENCH BOTTOM AS RESTRICTED ABOVE. DO NOT USE IN THICKNESSES GREATER THAN 12 IN. TOTAL. INSTALL AND COMPACT IN 6-IN. MAXIMUM LAYERS
BEDDING	SUITABLE AS RESTRICTED ABOVE. INSTALL IN 6-IN. MAXIMUM LAYERS. LEVEL FINAL GRADE BY HAND. MINIMUM DEPTH 4 IN. (6 IN. IN ROCK CUTS).	INSTALL AND COMPACT IN 6-IN. MAXIMUM LAYERS. LEVEL FINAL GRADE BY HAND. MINIMUM DEPTH 4 IN. (6 IN. IN ROCK CUTS).	SUITABLE AS RESTRICTED ABOVE. INSTALL AND COMPACT IN 6-IN. MAXIMUM LAYERS. LEVEL FINAL GRADE BY HAND MINIMUM DEPTH 4 IN. (6 IN. IN ROCK CUTS).	SUITABLE ONLY IN DRY TRENCH CONDITIONS. INSTALL AND COMPACT IN 6-IN. MAXIMUM LAYERS. LEVEL FINAL GRADE BY HAND. MINIMUM DEPTH 4 IN. (6 IN. IN ROCK CUTS).
HAUNCHING	SUITABLE AS RESTRICTED ABOVE. INSTALL IN 6-IN. MAXIMUM LAYERS. WORK IN AROUND PIPE BY HAND TO PROVIDE UNIFORM SUPPORT	INSTALL AND COMPACT IN 6-IN. MAXIMUM LAYERS WORK IN AROUND PIPE BY HAND TO PROVIDE UNIFORM SUPPORT.	SUITABLE AS RESTRICTED ABOVE. INSTALL AND COMPACT IN 6-IN. MAXIMUM LAYERS. LEVEL FINAL GRADE BY HAND. MINIMUM DEPTH 4 IN. (6 IN. IN ROCK CUTS).	SUITABLE AS RESTRICTED ABOVE. INSTALL AND COMPACT IN 6-IN. MAXIMUM LAYERS. WORK AROUND PIPE BY HAND. TO PROVIDE UNIFORM SUPPORT
INITIAL BACKFILL	SUITABLE AS RESTRICTED ABOVE. INSTALL TO A MINIMUM OF 6 IN. ABOVE PIPE CROWN.	INSTALL AND COMPACT TO A MINIMUM OF 6 IN. ABOVE PIPE CROWN	SUITABLE AS RESTRICTED ABOVE. INSTALL AND COMPACT TO A MINIMUM OF 6 IN. ABOVE PIPE CROWN.	SUITABLE AS RESTRICTED ABOVE. INSTALL AND COMPACT TO A MINIMUM OF 6 IN. ABOVE PIPE CROWN.
EMBEDMENT COMPACTION	PLACE AND WORK BY HAND TO INSURE ALL EXCAVATED VOIDS AND HAUNCH AREAS ARE FILLED. FOR HIGH DENSITIES USE VIBRATORY COMPACTORS.	MINIMUM DENSITY 85 % STD. PROCTOR.[B]USE HAND TAMPERS OR VIBRATORY COMPACTORS.	MINIMUM DENSITY 85 % STD. PROCTOR.[B]USE HAND TAMPERS OR VIBRATORY COMPACTORS.	MINIMUM DENSITY 90 % STD. PROCTOR. [B]USE HAND TAMPERS OR VIBRATORY COMPACTORS. MAINTAIN MOISTURE CONTENT NEAR OPTIMUM TO MINIMIZE COMPACTIVE EFFORT.
FINAL BACKFILL	COMPACT AS REQUIRED BY THE ENGINEER.	COMPACT AS REQUIRED BY THE ENGINEER.	COMPACT AS REQUIRED BY THE ENGINEER.	COMPACT AS REQUIRED BY THE ENGINEER.

[B] WHEN USING MECHANICAL COMPACTORS AVOID CONTACT WITH PIPE. WHEN COMPACTING OVER PIPE CROWN MAINTAIN A MINIMUM OF 6 IN. COVER WHEN USING SMALL MECHANICAL COMPACTORES. WHEN USING LARGER COMPACTORS MAINTAIN MINIMUM CLEARANCES AS REQUIRED BY THE ENGINEER.
[C] THE MINIMUM DENSITIES GIVEN IN THE TABLE ARE INTEDED AS THE COMPATION REQUIREMENTS FOR OBTAINING SATISFACTORY EMBEDMENT STIFFNESS IN MOST INSTALLATION CONDITIONS.

GENERAL NOTES:

1. (M) MATERIALS: UNLESS OTHERWISE SPECIFIED ON THE PLANS OR HEREIN, CORRUGATED POLYETHYLENE PIPE SHALL CONFORM TO AASHTO M-294, LATEST EDITION, STANDARD SPECIFICATION FOR CORRUGATED POLYETHYLENE PIPE.
2. RESINS: CORRUGATED POLYETHYLENE PIPE SHALL BE MANUFACTURED FROM HIGH DENSITY POLYETHYLENE VIRGIN COMPOUNDS, AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3350 FOR THE CELL CLASSIFICATION 324420C.
3. COUPLING BANDS: EXCEPT AS OTHERWISE REQUIRED HEREIN, COUPLING BANDS AND OTHER HARDWARE FOR CORRUGATED POLYETHYLENE PIPE SHALL DEMONSTRATE THAT THEY MEET THE SOIL TIGHTNESS REQUIREMENTS OF AASHTO SECTION 26.4.2.4 "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES."

   COUPLING BANDS SHALL LAP EQUALLY ON EACH OF THE PIPES BEING CONNECTED TO FORM A TIGHTLY CLOSED JOINT AFTER INSTALLATION.

   THE CORRUGATIONS IN THE BAND SHALL INDEX THE CORRUGATIONS IN THE PIPE ENDS TO ENGAGE THE FIRST OR SECOND CORRUGATION FROM THE END OF EACH PIPE.

   WHEN INFILTRATION OF EXFILTRATION IS A CONCERN, THE COUPLING MAY BE REQUIRED TO HAVE GASKETS. THE GASKET MATERIAL SHALL BE CLOSED-CELL EXPANDED RUBBER OR NEOPRENE.
4. (D) DESIGNATION OF TYPE: THE TYPES OF PIPE WILL BE INDICATED BY THE FOLLOWING DESCRIPTIONS

   TYPE C: THIS PIPE WILL HAVE A FULL CIRCULAR CROSS-SECTION, WITH A CORRUGATED SURFACE BOTH INSIDE AND OUTSIDE.

   TYPE S: THIS PIPE WILL HAVE A FULL CIRCULAR CROSS-SECTION, WITH AN OUTER CORRUGATED PIPE WALL AND A SMOOTH INNER LINER.

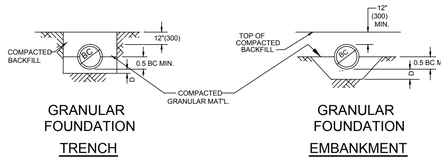
   TYPE D: THIS PIPE SHALL CONSIST OF AN ESSENTIALLY SMOOTH WATERWAY BRACED CIRCUMFERENTIALLY WITH CIRCULAR RIBS WHICH ARE FORMED SIMULTANEOUSLY WITH A SMOOTH OUTER WALL.
5. (S) INSTALLATION: CORRUGATED POLYETHYLENE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D-2321, LATEST EDITION, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS."

TRENCH WIDTH BASED ON OUTSIDE DIAMETER

PIPE (INSIDE) DIAMETER IN. (MM)	TRENCH WIDTH FT. (M)
15 (375)	3.0 (1)
18 (450)	3.2 (1)
24 (600)	3.9 (1.2)
30 (750)	4.8 (1.5)
36 (900)	5.4 (1.7)
42 (1050)	6.9 (2.1)
48 (1200)	7.4 (2.3)

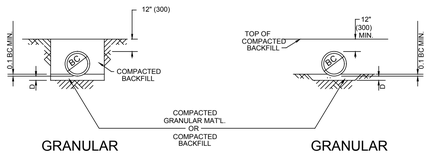
MULTIPLE INSTALLATION OF POLYETHYLENE PIPES

DIAMETER OF PIPE IN. (MM)	CLEAR DISTANCES BETWEEN PIPES FT. (M)
18 (450)	1' 2" (0.36)
24 (600)	1' 5" (0.44)
30 (750)	1' 8" (0.52)
36 (900)	1' 11" (0.60)
42 (1050)	2' 2" (0.68)
48 (1200)	2' 5" (0.76)



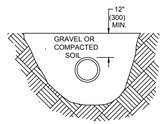
GRANULAR FOUNDATION TRENCH — GRANULAR FOUNDATION EMBANKMENT

CLASS B
(PRIVATE)

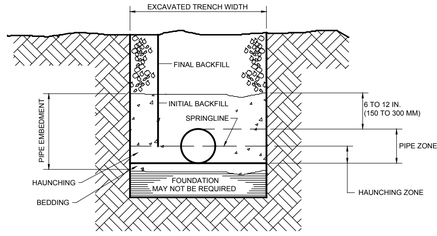


GRANULAR FOUNDATION TRENCH — GRANULAR FOUNDATION EMBANKMENT

CLASS C
(PRIVATE)



OPEN DITCH INSTALLATION



TRENCH CROSS SECTION SHOWING TERMINOLOGY

HIGH DENSITY CORRUGATED POLYETHYLENE PIPE
HEIGHT OF COVER
H-20 AND E-80 LIVE LOADS

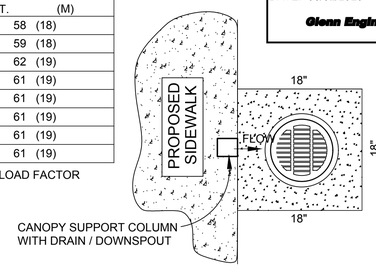
NOMINAL DIAMETER IN. (MM)	MINIMUM COVER IN. & (MM) H-20 E-80	MAXIMUM COVER FT. (M)
12 (300)	12 (300) 24 (600)	58 (18)
15 (375)	12 (300) 24 (600)	59 (18)
18 (450)	12 (300) 24 (600)	62 (19)
24 (600)	12 (300) 24 (600)	61 (19)
30 (750)	12 (300) 24 (600)	61 (19)
36 (900)	12 (300) 24 (600)	61 (19)
42 (1050)	12 (300) 24 (600)	61 (19)
48 (1200)	12 (300) 24 (600)	61 (19)

STRUCTURAL DESIGN CALCULATIONS BASED UPON LOAD FACTOR DESIGN METHODOLOGY PER AASHTO.

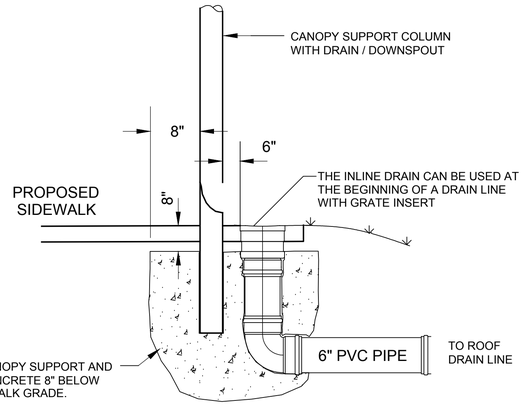
CLASSES OF EMBEDMENT AND BACKFILL MATERIALS

CLASS	TYPE	SOIL GROUP SYMBOL D 2487	DESCRIPTION	PERCENTAGE PASSING SIEVE SIZES 1 1/2 IN. (40 MM)	NO. 4 (4.75 MM)	NO. 200 (0.075 MM)
IA	MANUFACTURED AGGREGATES OPEN-GRADED, CLEAN.	NONE	ANGULAR, CRUSHED STONE OR ROCK, CRUSHED GRAVEL, BROKEN CORAL, CRUSHED SLAG, CINDERS OR SHELLS: LARGE VOID CONTENT, CONTAIN LITTLE OR NO FINES.	100 %	≤ 10 %	< 5 %
IB	MANUFACTURED, PROCESSED AGGREGATES; DENSE-GRADED, CLEAN	NONE	ANGULAR, CRUSHED STONE (OR OTHER CLASS IA MATERIALS) AND STONE/SAND MIXTURES WITH GRADATIONS SELECTED TO MINIMIZE MIGRATION OF ADJACENT SOILS; CONTAIN LITTLE OR NO FINES (SEE X1.8.).	100 %	≤ 50 %	< 5 %
II	COARSE-GRAINED SOILS, CLEAN	GW	WELL-GRADED GRAVELS AND GRAVEL-SAND MIXTURES; LITTLE OR NO FINES.	100 %	< 50 % "COARSE FRACTION"	< 5 %
		GP	POORLY-GRADED GRAVELS AND GRAVEL-SAND MIXTURES; LITTLE OR NO FINES.			
		SW	WELL-GRADED SANDS AND GRAVELY SANDS; LITTLE OR NO FINES.		> 50 % OF "COARSE FRACTION"	
		SP	POORLY-GRADED SANDS AND GRAVEL SANDS; LITTLE OR NO FINES.			
	COARSE-GRAINED SOILS, BORDERLINE CLEAN TO W/FINES	E.G. GW-GC, SP-SM.	SANDS AND GRAVELS WHICH ARE BORDERLINE BETWEEN CLEAN AND WITH FINES.	100 %	VARIES	5 % TO 12 %
III	COARSE-GRAINED SOILS, WITH FINES	GM	SILTY GRAVELS, GRAVEL-SAND SILT MIXTURES.	100 %	< 50 % OF "COARSE FRACTION"	12 % TO 50 %
		GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES.			
		SM	SILTY SANDS, SAND-SILT MIXTURES.		> 50 % OF "COARSE FRACTION"	
		SC	CLAYEY SANDS, SAND-CLAY MIXTURES.			

ADS OR HANCOR PIPE INSTALLATION DETAILS FOR PRIVATE STORM DRAIN LINES



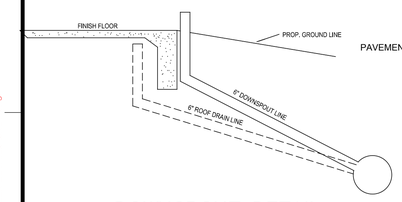
CANOPY SUPPORT COLUMN WITH DRAIN / DOWNSPOUT



NOTE:
1. AT ALL LOCATIONS OF CANOPY SUPPORTS WITH DRAINS A 6" PVC PIPE IS TO BE INSTALLED TO THE 12" PVC ROOF DRAIN LINE . PER THE DETAIL ABOVE.
SEE ARCH. PLAN FOR THE CONNECTION DETAIL

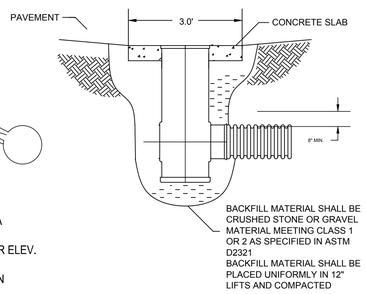
CANOPY DOWNSPOUT CONNECTION DETAIL

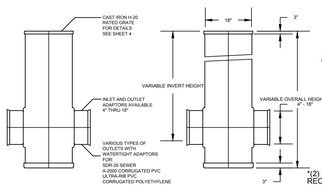
AREA DRAIN DETAILS



DOWNSPOUT DETAIL
NTS

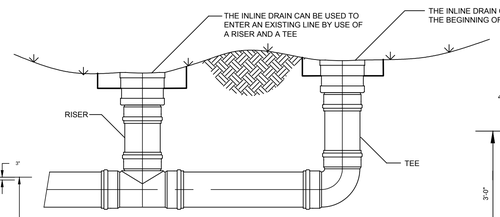
NOTE:
1. AT ALL LOCATIONS OF DOWNSPOUTS AND ROOF DRAINS A 6" PVC PIPE IS TO BE INSTALLED FROM THE 12" PVC LINE TO THE FOUNDATION AND EXTEND UP ABOVE THE FINISH FLOOR ELEV. SEE ARCH. PLAN FOR THE CONNECTION DETAIL AND THE ROOF PLAN FOR ACTUAL DOWNSPOUT AND ROOF DRAIN LOCATIONS.



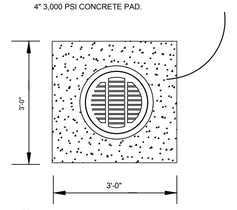


18" DRAIN BASIN

INSTALLATION DETAILS FOR ROOF DRAIN LINES



PIPE CHANGE



18" CAST IRON GRATE

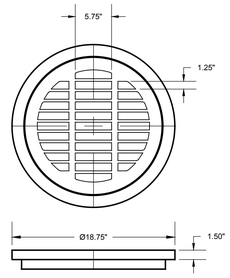
ROUND OR SQUARE
DRAINAREA = 161.4 SQ. INCH

GRATE HAS H-20 (HEAVY TRAFFIC) DOT RATING

QUALITY, MATERIAL SHALL CONFORM TO ASTM A48 - CLASS 30B

PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT

NOT TO SCALE
(PRIVATE)



PRIVATE ROOF DRAIN DETAILS

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN: Charalyn Armijo
DATE: 06/01/2020
Glenn Engineering Corporation

Stantec
Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
Tel: (214) 473-2400 / Fax: (214) 473-2401
www.stantec.com

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Consultants

GLENN ENGINEERING
T.B.P.E. FIRM REGISTRATION NO. F - 303
PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02
Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal
STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER
The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

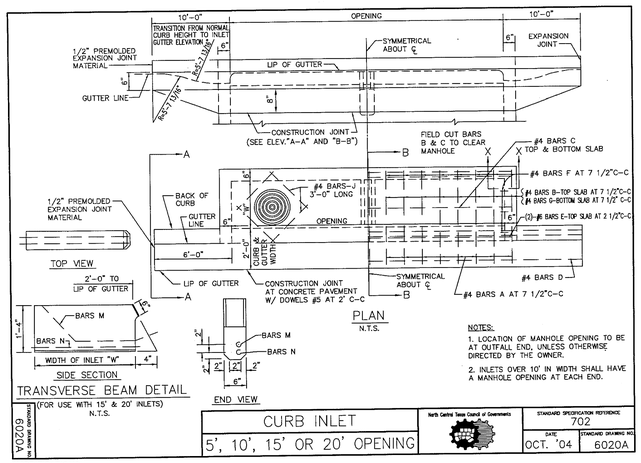
Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
ROOF DRAIN DETAILS

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 05.14

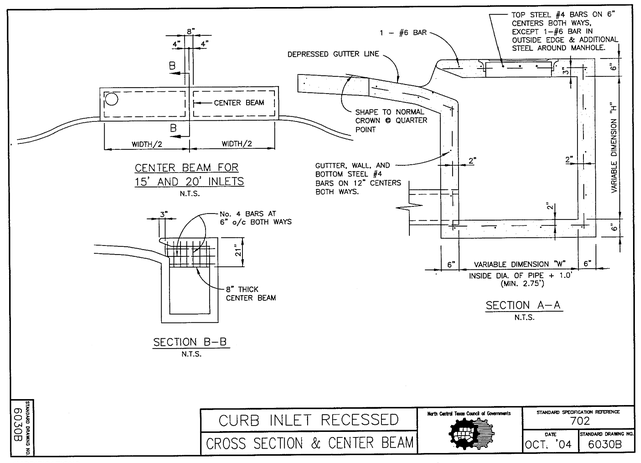
Plotted: Jun 1, 2020, 2:32 PM by user: john - Saved: 7/12/2019 by user: robert
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK DETAILS ONLY.dwg



NOTES:
1. LOCATION OF MANHOLE OPENING TO BE AT OUTFALL END, UNLESS OTHERWISE DIRECTED BY THE OWNER.
2. INLETS OVER 10' IN WIDTH SHALL HAVE A MANHOLE OPENING AT EACH END.

60204 DETAILING STANDARD NO.	CURB INLET 5', 10', 15' OR 20' OPENING	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702 DATE OCT. '04 / STANDARD DRAWING NO. 6020A

*MODIFICATIONS
1. ALL CONCRETE STRUCTURES SHALL BE CLASS F (4200 PSI, MINIMUM 6.5 SACK CEMENT)
2. NO FLY ASH ALLOWED IN CONCRETE FOR STRUCTURES



6030B DETAILING STANDARD NO.	CURB INLET RECESSED CROSS SECTION & CENTER BEAM	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702 DATE OCT. '04 / STANDARD DRAWING NO. 6030B

*MODIFICATIONS
1. ALL CONCRETE STRUCTURES SHALL BE CLASS F (4200 PSI, MINIMUM 6.5 SACK CEMENT)
2. NO FLY ASH ALLOWED IN CONCRETE FOR STRUCTURES

GENERAL NOTES:
1. IN GENERAL, REINFORCING STEEL SHALL BE #4 BARS ON 12" CENTERS BOTH WAYS FOR GUTTER, BOTTOM SLAB ENDS, FRONT AND BACK WALLS, AND #4 BARS ON 6" CENTERS BOTH WAYS FOR TOP SLAB. AN ADDITIONAL #6 BAR SHALL BE PLACED IN THE FRONT EDGE OF THE TOP SLAB IN THE INLETS AND ADDITIONAL REINFORCING STEEL SHALL BE PLACED AROUND MANHOLES AS SHOWN.
2. ALL REINFORCING STEEL SHALL BE GRADE 60.
3. ALL CONCRETE SHALL BE CLASS "A". ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
4. ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2" TO THE CENTERS OF THE BARS.
5. 10'-0" OF EXISTING CURB AND GUTTER UPSTREAM AND 10'-0" OF EXISTING CURB AND GUTTER DOWNSTREAM SHALL BE REMOVED AND REPOURED INTEGRALLY WITH EACH INLET.
6. ALL BACK FILLING SHALL BE PERFORMED BY MECHANICAL TAMPING TO 90% STANDARD PROCTOR DENSITY.

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN:
DATE: 06/01/2020
Glenn Engineering Corporation

6030D DETAILING STANDARD NO.	CURB INLET RECESSED GENERAL NOTES	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702 DATE OCT. '04 / STANDARD DRAWING NO. 6030D

*MODIFICATIONS
1. ALL CONCRETE STRUCTURES SHALL BE CLASS F (4200 PSI, MINIMUM 6.5 SACK CEMENT)
2. NO FLY ASH ALLOWED IN CONCRETE FOR STRUCTURES
3. ALL BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DESNITY

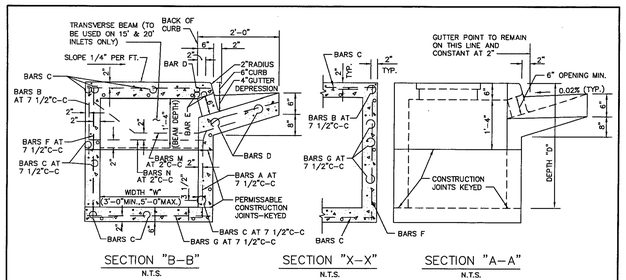
BILL OF REINFORCING STEEL

DEPTH "D"	ALL WIDTHS AND LENGTHS	OPENING LENGTH "L" = 5ft								OPENING LENGTH "L" = 10ft								OPENING LENGTH "L" = 15 ft								OPENING LENGTH "L" = 20 ft							
		Widths "W" 3ft | 4ft | 5ft								Widths "W" 3ft | 4ft | 5ft								Widths "W" 3ft | 4ft | 5ft								Widths "W" 3ft | 4ft | 5ft							
	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS	BARS
	C	D	E	J	F	F	A	B	G	F	F	A	B	G	F	F	A	B	G	M	N	F	F	A	B	G	M	N	F	F	A	B	G	M	N
3'-6"	17	3	2	4	20	24	28	10	10	20	28	32	36	18	18	28	36	40	44	26	26	36	2	2	44	48	52	34	34	44	2	2
3'-9"	18	*	*	*	*	*	*	*	*	20	*	*	*	*	*	28	*	*	*	*	*	36	*	*	*	*	*	*	*	44	*	*
4'-0"	19	*	*	*	*	*	*	*	*	24	*	*	*	*	*	32	*	*	*	*	*	40	*	*	*	*	*	*	*	48	*	*
4'-3"	19	*	*	*	*	*	*	*	*	24	*	*	*	*	*	32	*	*	*	*	*	40	*	*	*	*	*	*	*	48	*	*
4'-6"	21	*	*	*	*	*	*	*	*	26	*	*	*	*	*	34	*	*	*	*	*	42	*	*	*	*	*	*	*	50	*	*
4'-9"	21	*	*	*	*	*	*	*	*	26	*	*	*	*	*	34	*	*	*	*	*	42	*	*	*	*	*	*	*	50	*	*
5'-0"	21	*	*	*	*	*	*	*	*	26	*	*	*	*	*	34	*	*	*	*	*	42	*	*	*	*	*	*	*	50	*	*
5'-3"	23	*	*	*	*	*	*	*	*	28	*	*	*	*	*	36	*	*	*	*	*	44	*	*	*	*	*	*	*	52	*	*
5'-6"	23	*	*	*	*	*	*	*	*	28	*	*	*	*	*	36	*	*	*	*	*	44	*	*	*	*	*	*	*	52	*	*
5'-9"	25	*	*	*	*	*	*	*	*	30	*	*	*	*	*	38	*	*	*	*	*	46	*	*	*	*	*	*	*	54	*	*
6'-0"	25	*	*	*	*	*	*	*	*	30	*	*	*	*	*	38	*	*	*	*	*	46	*	*	*	*	*	*	*	54	*	*
6'-3"	26	*	*	*	*	*	*	*	*	30	*	*	*	*	*	38	*	*	*	*	*	46	*	*	*	*	*	*	*	54	*	*
6'-6"	27	*	*	*	*	*	*	*	*	32	*	*	*	*	*	40	*	*	*	*	*	48	*	*	*	*	*	*	*	56	*	*
6'-9"	27	*	*	*	*	*	*	*	*	32	*	*	*	*	*	40	*	*	*	*	*	48	*	*	*	*	*	*	*	56	*	*
7'-0"	29	*	*	*	*	*	*	*	*	34	*	*	*	*	*	42	*	*	*	*	*	50	*	*	*	*	*	*	*	58	*	*
7'-3"	29	*	*	*	*	*	*	*	*	34	*	*	*	*	*	42	*	*	*	*	*	50	*	*	*	*	*	*	*	58	*	*
7'-6"	30	*	*	*	*	*	*	*	*	36	*	*	*	*	*	42	*	*	*	*	*	50	*	*	*	*	*	*	*	58	*	*
7'-9"	31	*	*	*	*	*	*	*	*	36	*	*	*	*	*	44	*	*	*	*	*	52	*	*	*	*	*	*	*	60	*	*
8'-0"	31	*	*	*	*	*	*	*	*	36	*	*	*	*	*	44	*	*	*	*	*	52	*	*	*	*	*	*	*	60	*	*
8'-3"	32	*	*	*	*	*	*	*	*	36	*	*	*	*	*	44	*	*	*	*	*	52	*	*	*	*	*	*	*	60	*	*
8'-6"	33	*	*	*	*	*	*	*	*	38	*	*	*	*	*	46	*	*	*	*	*	54	*	*	*	*	*	*	*	62	*	*
8'-9"	34	*	*	*	*	*	*	*	*	38	*	*	*	*	*	46	*	*	*	*	*	54	*	*	*	*	*	*	*	62	*	*
9'-0"	35	*	*	*	*	*	*	*	*	40	*	*	*	*	*	48	*	*	*	*	*	56	*	*	*	*	*	*	*	64	*	*
9'-3"	36	*	*	*	*	*	*	*	*	40	*	*	*	*	*	48	*	*	*	*	*	56	*	*	*	*	*	*	*	64	*	*
9'-6"	37	*	*	*	*	*	*	*	*	42	*	*	*	*	*	50	*	*	*	*	*	58	*	*	*	*	*	*	*	66	*	*
10'-0"	38	*	*	*	*	*	*	*	*	42	*	*	*	*	*	50	*	*	*	*	*	58	*	*	*	*	*	*	*	66	*	*

NOTE:
FOR CONVENIENCE, DEPTHS OF INLETS SHOWN IN ABOVE TABLES ARE IN INCREMENTS OF 3 INCHES BUT ANY DEPTHS OTHER THAN THOSE SHOWN ABOVE MAY BE USED WHEREVER DEEMED NECESSARY. QUANTITIES FOR OTHER DEPTHS FALLING WITHIN THE LIMITS OF THE TABLE MAY BE FOUND BY INTERPOLATION.

6020D DETAILING STANDARD NO.	CURB INLET BILL OF REINFORCING STEEL	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702 DATE OCT. '04 / STANDARD DRAWING NO. 6020D

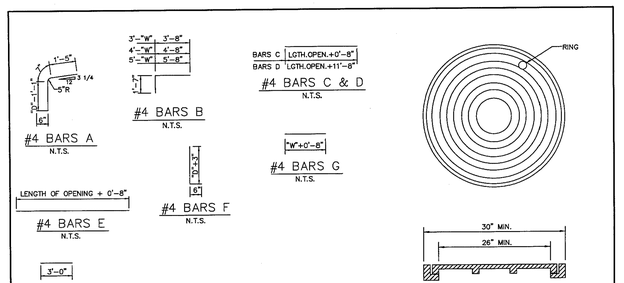
*MODIFICATIONS
1. ALL CONCRETE STRUCTURES SHALL BE CLASS F (4200 PSI, MINIMUM 6.5 SACK CEMENT)
2. NO FLY ASH ALLOWED IN CONCRETE FOR STRUCTURES



GENERAL NOTES:
1. ALL CONCRETE SHALL BE CLASS "A" CONCRETE.
2. REINFORCING BARS SHALL BE STANDARD GRADE STEEL, DEFORMED REINFORCING BARS OF A DIAMETER AND LENGTH AS SHOWN.
3. CHAMFER ALL EXPOSED CORNERS 3/4" EXCEPT WHERE OTHERWISE NOTED.
4. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
5. FIELD CUT AND BEND BARS AS NECESSARY TO ACCOMODATE STORM SEWER PIPE.
6. RING AND COVER SHALL BE APPROVED BY THE OWNER AND INSTALLED BY THE CONTRACTOR.

6020B DETAILING STANDARD NO.	CURB INLET CROSS SECTION & INLET THROAT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702 DATE OCT. '04 / STANDARD DRAWING NO. 6020B

*MODIFICATIONS
1. ALL CONCRETE STRUCTURES SHALL BE CLASS F (4200 PSI, MINIMUM 6.5 SACK CEMENT)
2. NO FLY ASH ALLOWED IN CONCRETE FOR STRUCTURES
3. INLET LID TO BE LOCKING



6030C DETAILING STANDARD NO.	CURB INLET REBAR & M.H. FRAME & COVER	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702 DATE OCT. '04 / STANDARD DRAWING NO. 6020C

*MODIFICATIONS
1. ALL CONCRETE STRUCTURES SHALL BE CLASS F (4200 PSI, MINIMUM 6.5 SACK CEMENT)
2. NO FLY ASH ALLOWED IN CONCRETE FOR STRUCTURES
3. INLET LID TO BE LOCKING

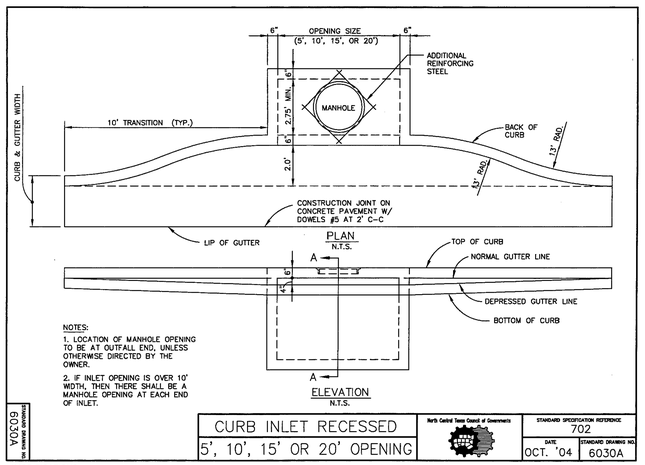
SUMMARY OF QUANTITIES FOR CURB INLETS

DEPTH "D"	5'-0" OPENING						10'-0" OPENING						15'-0" OPENING						20'-0" OPENING					
	WIDTH 3'-0"		WIDTH 4'-0"		WIDTH 5'-0"		WIDTH 3'-0"		WIDTH 4'-0"		WIDTH 5'-0"		WIDTH 3'-0"		WIDTH 4'-0"		WIDTH 5'-0"		WIDTH 3'-0"		WIDTH 4'-0"		WIDTH 5'-0"	
	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.	CONC C.Y.	STEEL LBS.
3'-6"	2.62	306	2.95	332	3.28	373	4.12	479	4.64	521	5.20	564	5.69	667	6.40	721	7.10	775	7.20	846	8.11	909	9.03	976
3'-9"	2.70	309	3.04	341	3.39	373	4.25	494	4.78	536	5.34	579	5.87	687	6.58	741	7.30	796	7.42	874	8.34	937	9.27	1010
4'-0"	2.78	328	3.14	364	3.49	399	4.38	518	4.92	565	5.49	610	6.05	718	6.77	776	7.49	835	7.64	909	8.58	976	9.51	1046
4'-3"	2.87	334	3.23	370	3.59	406	4.51	526	5.06	573	5.64	619	6.22	729	6.95	787	7.69	847	7.87	922	8.81	990	9.75	1061
4'-6"	2.95	356	3.32	394	3.69	431	4.64	558	5.20	607	5.79	656	6.40	770	7.14	830	7.88	891	8.09	973	9.04	1043	9.99	1115
4'-9"	3.03	361	3.41	410	3.79	438	4.77	566	5.34	616	5.94	665	6.57	780	7.32	841	8.07	903	8.31	986	9.27	1056	10.23	1129
5'-0"	3.12	367	3.51	416	3.90	445	4.90	574	5.47	624	6.09	674	6.75	791	7.51	853	8.27	915	8.53	999	9.50	1070	10.47	1144
5'-3"	3.20	383	3.60	424	4.00	465	5.03	600	5.61	652	6.23	704	6.93	827	7.69	890	8.46	955	8.76	1044	9.73	1118	10.71	1194
5'-6"	3.28	389	3.69	430	4.10	472	5.16	608	5.75	661	6.38	713	7.11	837	7.88	901	8.66	967	8.98	1057	9.97	1131	10.95	1208
5'-9"	3.37	405	3.78	451	4.20	495	5.29	635	5.89	690	6.53	744	7.28	874	8.07	940	8.85	1007	9.20	1102	10.20	1178	11.19	1258
6'-0"	3.45	415	3.88	460	4.30	504	5.42	646	6.03	702	6.68	757	7.45	888	8.25	954	9.05	1022	9.42	1119	10.43	1196	11.43	1276
6'-3"	3.53	425	3.97	470	4.41	515	5.55	661	6.17	718	6.83	773	7.63	908	8.44	975	9.24	1044	9.64	1147	10.66	1223	11.67	1305
6'-6"	3.62	437	4.06	486	4.51	532	5.68	681	6.31	739	6.97	797	7.81	935	8.62	1005	9.43	1057	9.87	1178	10.89	1258	11.92	1340
6'-9"	3.70	441	4.15	490	4.61	537	5.81	688	6.45	747	7.12	806	7.98	945	8.81	1015	9.63	1066	10.09	1191	11.12	1272	12.15	1355
7'-0"	3.78	460	4.25	510	4.71	560	5.94	716	6.59	777	7.27	837	8.16	981	8.99	1053	9.82	1126	10.31	1237	11.35	1319	12.40	1404
7'-3"	3.86	465	4.34	516	4.81	567	6.07	724	6.72	785	7.42	846	8.33	992	9.18	1065	10.02	1138	10.53	1249	11.59	1333	12.64	1418
7'-6"	3.95	477	4.43	529	4.91	570	6.20	742	6.86	804	7.57	866	8.51	1016	9.36	1089	10.21	1163	10.75	1290	11.82	1365	12.88	1451
7'-9"	4.03	491	4.53	544	5.02	597	6.33	762	7.00	826	7.71	890	8.67	1040	9.55	1116	10.41	1193	10.98	1313	12.05	1399	13.12	1498
8'-0"	4.12	496	4.62	550	5.12	604	6.46	770	7.14	834	7.86	899	8.86	1051	9.73	1129	10.60	1205	11.20	1325	12.28	1412	13.36	1510
8'-3"	4.20	504	4.71	559	5.22	613	6.58	784	7.28	849	8.01	915	9.04	1069	9.92	1149	10.80	1228	11.42	1353	12.51	1440	13.60	1529
8'-6"	4.28	519	4.80	576	5.32	632	6.71	804	7.42	871	8.16	938	9.21	1107	10.10	1176	10.99	1257	11.64	1385	12.74	1474	13.84	1565
8'-9"	4.37	528	4.90	586	5.42	643	6.84	819	7.56	886	8.31	954	9.39	1119	10.29	1199	11.18	1280	11.87	1410	12.97	1500	14.08	1592
9'-0"	4.45	545	4.99	605	5.53	664	6.97	842	7.70	912	8.46	982	9.56	1148	10.47	1231	11.38	1313	12.09	1447	13.21	1539	14.32	1631
9'-3"	4.53	554	5.08	614	5.63	674	7.10	858	7.84	929	8.60	999	9.74	1169	10.66	1252	11.57	1335	12.31	1474	13.44	1563	14.56	1660
9'-6"	4.62	568	5.17	630	5.73	692	7.23	878	7.97	950	8.75	1022	9.92	1195	10.84	1280	11.77	1365	12.53	1505	13.67	1600	14.80	1696
10'-0"	4.78	582	5.36	645	5.93	708	7.49	900	8.11	974	9.05	1048	10.27	1227	11.21	1312	12.16	1399	12.98	1546	14.13	1642	15.29	1739

NOTE:
FOR CONVENIENCE, DEPTHS OF INLETS SHOWN IN ABOVE TABLES ARE IN INCREMENTS OF 3 INCHES BUT ANY DEPTHS OTHER THAN THOSE SHOWN ABOVE MAY BE USED WHEREVER DEEMED NECESSARY. QUANTITIES FOR OTHER DEPTHS FALLING WITHIN THE LIMITS OF THE TABLE MAY BE FOUND BY INTERPOLATION.

6020E DETAILING STANDARD NO.	CURB INLET SUMMARY OF QUANTITIES	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702 DATE OCT. '04 / STANDARD DRAWING NO. 6020E

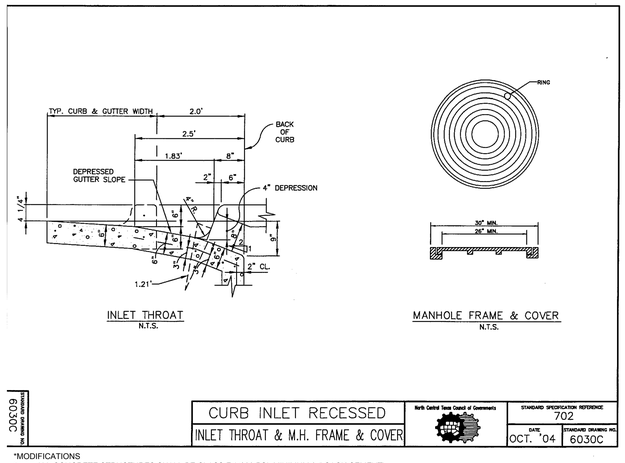
*MODIFICATIONS
1. ALL CONCRETE STRUCTURES SHALL BE CLASS F (4200 PSI, MINIMUM 6.5 SACK CEMENT)
2. NO FLY ASH ALLOWED IN CONCRETE FOR STRUCTURES

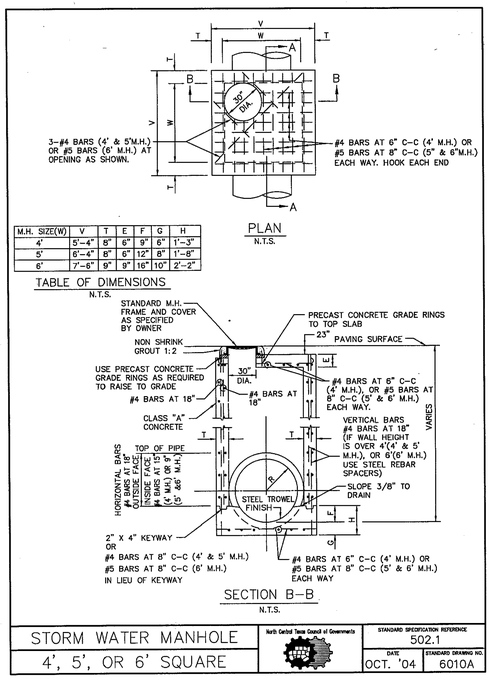


NOTES:
1. LOCATION OF MANHOLE OPENING TO BE AT OUTFALL END, UNLESS OTHERWISE DIRECTED BY THE OWNER.
2. IF INLET OPENING IS OVER 10' WIDTH, THEN THERE SHALL BE A MANHOLE OPENING AT EACH END OF INLET.

6030A DETAILING STANDARD NO.	CURB INLET RECESSED 5', 10', 15' OR 20' OPENING	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702 DATE OCT. '04 / STANDARD DRAWING NO. 6030A

*MODIFICATIONS
1. ALL CONCRETE STRUCTURES SHALL BE CLASS F (4200 PSI, MINIMUM 6.5 SACK CEMENT)
2. NO FLY ASH ALLOWED IN CONCRETE FOR STRUCTURES

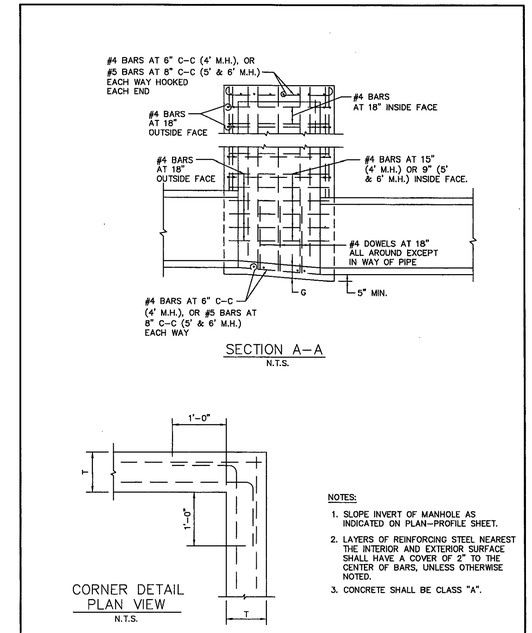

TYP. CURB & GUTTER WIDTH
2.0'
2.5'
1.83'
8"
2"
6"
4" DEPRESSION
BACK OF CURB
DEPRESSED GUTTER SLOPE
4 1/4"
4.0"
3"
3"
3



M.H. SIZE(W)	V	T	E	F	G	H
4'	5'-4"	8"	6"	9"	6"	1'-3"
5'	6'-4"	8"	6"	12"	8"	1'-8"
6'	7'-6"	9"	9"	16"	10"	2'-2"

STORM WATER MANHOLE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.1
4', 5', OR 6' SQUARE		DATE: OCT. '04 / STANDARD DRAWING NO. 6010A

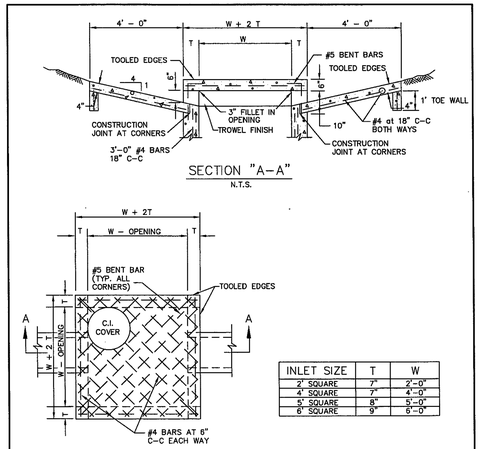
*MODIFICATIONS
1. ALL CONCRETE STRUCTURES SHALL BE CLASS F (4200 PSI, MINIMUM 6.5 SACK CEMENT)
2. NO FLY ASH ALLOWED IN CONCRETE FOR STRUCTURES



NOTES:
1. SLOPE INVERT OF MANHOLE AS INDICATED ON PLAN-PROFILE SHEET.
2. LAYERS OF REINFORCING STEEL NEAREST THE INTERIOR AND EXTERIOR SURFACE SHALL HAVE A COVER OF 2" TO THE CENTER OF BARS, UNLESS OTHERWISE NOTED.
3. CONCRETE SHALL BE CLASS "A".

STORM WATER MANHOLE	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 502.1
4', 5', OR 6' SQUARE		DATE: OCT. '04 / STANDARD DRAWING NO. 6010B

*MODIFICATIONS
1. ALL CONCRETE STRUCTURES SHALL BE CLASS F (4200 PSI, MINIMUM 6.5 SACK CEMENT)
2. NO FLY ASH ALLOWED IN CONCRETE FOR STRUCTURES



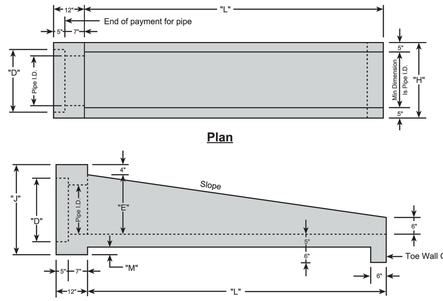
INLET SIZE	T	W
2' SQUARE	7"	2'-0"
4' SQUARE	7"	4'-0"
5' SQUARE	8"	5'-0"
6' SQUARE	9"	6'-0"

NOTES:
1. MATERIAL AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF NCTCOG STANDARD SPECIFICATIONS FOR STANDARD CONCRETE MANHOLES. MINIMUM CLASS "A" CONCRETE.
2. LAYERS OF REINFORCING STEEL NEAREST THE INTERIOR AND EXTERIOR SURFACES SHALL HAVE A COVER OF 2" TO THE CENTER OF BARS, UNLESS OTHERWISE NOTED.
3. FOR DETAILS OF REINFORCING OF LOWER PORTIONS OF INLET SEE APPROPRIATE SQUARE MANHOLE DETAILS.
4. DEPTH OF DROP INLET FROM FINISHED GRADE TO FLOW LINE OF INLET IS VARIABLE. APPROXIMATE DEPTH WILL BE SHOWN ON PLANS AT LOCATION OF INLET.
5. ALL STANDARD DROP INLETS SHALL HAVE ONE OPENING ON EACH SIDE UNLESS OTHERWISE SHOWN ON PLANS.
6. DECK MAY BE REINFORCED SAME AS 4' SQUARE MANHOLE.

DROP INLET	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 702
2', 4', 5' OR 6' SQUARE		DATE: OCT. '04 / STANDARD DRAWING NO. 6040

*MODIFICATIONS
1. ALL CONCRETE STRUCTURES SHALL BE CLASS F (4200 PSI, MINIMUM 6.5 SACK CEMENT)
2. NO FLY ASH ALLOWED IN CONCRETE FOR STRUCTURES

Precast Drainage Structures



Basic Dimensions

Pipe Dia. (in.)	Slope	"D" (in.)	"E" (in.)	"H" (in.)	"J" (in.)	"L" (in.)	"M" (in.)	Weight (Lbs.)
12	3:1	17.000	17.500	28.00	26.250	34.500	0.75	1,328
	4:1	17.000	17.500	28.00	26.250	46.000	0.75	1,558
	6:1	17.000	17.500	28.00	26.250	69.000	0.75	2,017
15	3:1	20.500	17.500	28.00	26.250	34.500	0.75	1,243
	4:1	20.500	17.500	28.00	26.250	46.000	0.75	1,472
	6:1	20.500	17.500	28.00	26.250	69.000	0.75	1,831
18	3:1	24.000	21.000	30.00	30.000	45.000	1.00	1,751
	4:1	24.000	21.000	30.00	30.000	60.000	1.00	2,018
	6:1	24.000	21.000	30.00	30.000	90.000	1.00	2,831
24	3:1	31.000	27.500	37.00	37.000	64.500	1.50	2,831
	4:1	31.000	27.500	37.00	37.000	85.000	1.50	3,596
	6:1	31.000	27.500	37.00	37.000	129.000	1.50	4,818
30	3:1	38.500	34.500	41.00	44.500	85.500	2.25	4,092
	4:1	38.500	34.500	41.00	44.500	114.000	2.25	5,082
	6:1	38.500	34.500	41.00	44.500	171.000	2.25	7,060
36	3:1	45.500	41.000	47.00	51.500	105.000	2.50	5,544
	4:1	45.500	41.000	47.00	51.500	140.000	2.50	6,827
	6:1	45.500	41.000	47.00	51.500	210.000	2.50	8,722

Note:
1.) The Safety End Treatment option shown on this sheet should only be utilized in the following instances:
A.) On cross-drainage structures for 36" or smaller diameter pipes.
B.) On parallel-drainage structures for 30" or smaller pipes.
2.) Cross & Parallel drainage structures larger than the requirements listed above shall utilize other safety end treatment designs shown elsewhere in the plans.
3.) All exposed corners shall be chamfered 3/4".
4.) Manufacture of this product shall conform to the requirements of Item 467 except that minimum reinforcing shall be #4 @ 6" (Grade 40) or #4 @ 9" (Grade 60) each way or 6 x 6 - W12 x W12 or 5 x 5 - W10 x W10 welded wire fabric.
5.) Concrete for precast (steel formed) sections shall be a minimum of Class "C" (4,000 psi).
6.) At the option and expense of the contractor, the next larger size of Safety End Treatment may be furnished as long as the "D" dimension cast is that of the required size of pipe.

-No Scale-
All dimensions subject to allowable specification tolerances.

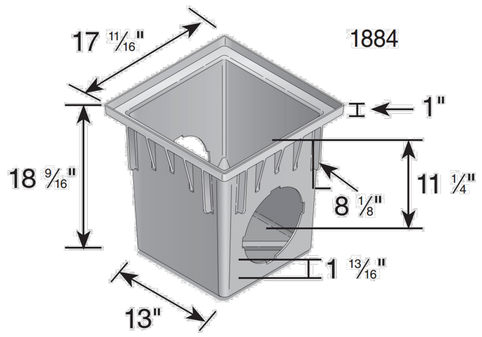
TITLE	PLANT	STATE	SECTION.PAGE	DATE
Precast Safety End Treatment For Reinforced Concrete Pipe	Grand Prairie Houston	TX	7.4	Feb 2016

FORTERRA

NDS TECHNICAL SPECIFICATIONS

WE PUT WATER IN ITS PLACE

18" ONE PIECE CATCH BASIN



Material: UV Protected High Density Polyethylene (HDPE)
Weight: 9.65 lbs
Colors: Black
- 18" One Piece Catch Basin with 2 Openings (1882)
  Includes 2 #1890 Reducer Rings
- 18" One Piece Catch Basin with 4 Openings (1884)
  Includes 4 #1890 Reducer Rings

Requires either #1206, #1242, #1245, #1266, #1888, or #1889 universal outlet to connect pipe

851 N. Harvard Avenue
Lindsay, CA 93247
800-726-1994

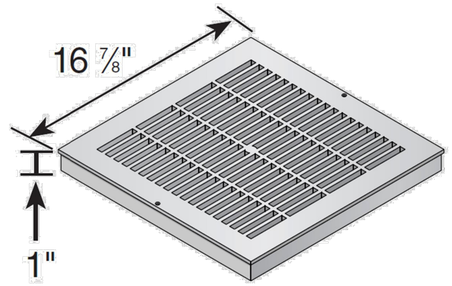
Visit ndspro.com for specs, detail drawings, and case studies

NDS WE PUT WATER IN ITS PLACE

NDS TECHNICAL SPECIFICATIONS

WE PUT WATER IN ITS PLACE

18" x 18" Square Grate



7/16" Grate Opening

Part #: 1810 ,
1811 and 1812
Material:
(HDPE) High Density Polypropylene
Color: #1810 (Gray), #1811 (Black) and #1812(Green)
Fits: Catch Basin #1882, #1884, #1800, #1804, #1816, #1830 and #1840.
Grate Opening: 7/16"
Open Surface Area: 86.31 Sq. Inches
Head Pressure / Flow Rate:
Head (inches) - Max Flow
1"= 373.40 GPM
1/2" = 264.03 GPM
UV inhibitor.
Weigh Per Each: 7.71 lbs.

Made in USA.

Load Recommendation Guide

Class B
- Loads of 61-175 psi.
- Recommended for medium-duty pneumatic tire traffic, autos and light trucks at speeds less than 20 m.p.h.

ADA Compliant

851 N. Harvard Avenue
Lindsay, CA 93247
800-726-1994

Visit ndspro.com for specs, detail drawings, and case studies

NDS WE PUT WATER IN ITS PLACE

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN:
DATE: 06/01/2020
Glenn Engineering Corporation

NCTCOG DETAILS HAVE BEEN MODIFIED BY THE CITY OF ROCKWALL. SEE NOTES DESIGNATED *MODIFICATIONS FOR THOSE REVISED.

Stantec
Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
Tel: (214) 473-2400 / Fax: (214) 473-2401
www.stantec.com

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Consultants

GLENN ENGINEERING
T.B.P.E. FIRM REGISTRATION NO. F - 303
PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02

Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
STORM DETAILS 4

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 05.16

Plotted: Jun 1, 2020, 2:33 PM by user: john - Saved: 7/12/2019 by user: john
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK DETAILS ONLY.dwg

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

CROSS PIPE LENGTHS & PIPE RUNNER LENGTHS (1)(2)

Nominal Culvert I.D.	Pipe Culvert Spa - G	Cross Pipe Length	Pipe Runner Length 3:1 Side Slope 0° Skew	15° Skew	30° Skew	45° Skew	4:1 Side Slope 0° Skew	15° Skew	30° Skew	45° Skew	6:1 Side Slope 0° Skew	15° Skew	30° Skew	45° Skew
24"	1'-7"	3'-5"	N/A	N/A	N/A	5'-10"	N/A	N/A	N/A	8'-1"	N/A	N/A	N/A	12'-9"
27"	1'-8"	3'-8"	N/A	N/A	5'-5"	6'-11"	N/A	N/A	7'-7"	9'-7"	N/A	N/A	11'-11"	14'-11"
30"	1'-10"	3'-11"	N/A	N/A	6'-4"	8'-0"	N/A	N/A	8'-9"	11'-0"	N/A	N/A	13'-8"	17'-0"
33"	1'-11"	4'-2"	6'-2"	6'-5"	7'-3"	9'-1"	8'-6"	8'-10"	10'-0"	12'-5"	13'-3"	13'-9"	15'-5"	19'-2"
36"	2'-1"	4'-5"	6'-11"	7'-3"	8'-2"	10'-2"	9'-6"	9'-11"	11'-2"	13'-10"	14'-9"	15'-3"	17'-2"	21'-3"
42"	2'-4"	4'-11"	8'-6"	8'-10"	9'-11"	12'-4"	11'-7"	12'-0"	13'-6"	16'-8"	17'-9"	18'-5"	20'-8"	25'-7"
48"	2'-7"	5'-5"	10'-1"	10'-5"	11'-9"	N/A	13'-7"	14'-2"	15'-10"	N/A	20'-9"	21'-6"	24'-2"	N/A
54"	3'-0"	5'-11"	11'-8"	12'-1"	N/A	N/A	15'-8"	16'-3"	N/A	N/A	23'-10"	24'-8"	N/A	N/A
60"	3'-3"	6'-5"	13'-3"	N/A	N/A	N/A	17'-9"	N/A	N/A	N/A	26'-10"	N/A	N/A	N/A

TYPICAL PIPE CULVERT MITERS (3)

Side Slope	0° Skew	15° Skew	30° Skew	45° Skew
3:1	3:1	3.1061:1	3.4641:1	4.2431:1
4:1	4:1	4.1411:1	4.6191:1	5.6571:1
6:1	6:1	6.2121:1	6.9281:1	8.4851:1

CONDITIONS WHERE PIPE RUNNERS (2) ARE NOT REQUIRED

Nominal Culvert I.D.	Single Pipe Culvert	Multiple Pipe Culverts
12" thru 21"	Skews thru 45°	Skews thru 45°
24"	Skews thru 45°	Skews thru 30°
27"	Skews thru 30°	Skews thru 15°
30"	Skews thru 15°	Always required
33"	Skews thru 15°	Always required
36"	Normal (No Skew)	Always required
42" to 60"	Always required	Always required

STANDARD PIPE SIZES & MAX PIPE RUNNER LENGTHS (1)

Pipe Size	Pipe O.D.	Pipe I.D.	Max Pipe Runner Length
2" STD	2.375"	2.067"	N/A
3" STD	3.500"	3.068"	10'-0"
4" STD	4.500"	4.026"	19'-8"
5" STD	5.563"	5.047"	34'-2"

ESTIMATED CONCRETE RIPRAP QUANTITIES (CY) (5)

Nominal Culvert I.D.	3:1 Side Slope 0° Skew	15° Skew	30° Skew	45° Skew	4:1 Side Slope 0° Skew	15° Skew	30° Skew	45° Skew	6:1 Side Slope 0° Skew	15° Skew	30° Skew	45° Skew
12"	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.8
15"	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9
18"	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9	1.0
21"	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0	1.2
24"	0.6	0.7	0.7	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.1	1.3
27"	0.7	0.7	0.8	0.9	0.8	0.9	0.9	1.1	1.1	1.1	1.2	1.4
30"	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.2	1.2	1.2	1.3	1.6
33"	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.3	1.3	1.4	1.5	1.7
36"	0.9	0.9	0.9	1.1	1.1	1.1	1.2	1.4	1.4	1.5	1.6	2.1
42"	1.0	1.0	1.1	1.3	1.2	1.3	1.3	1.6	1.6	1.7	1.8	2.1
48"	1.1	1.1	1.2	N/A	1.4	1.4	1.5	N/A	1.9	1.9	2.1	N/A
54"	1.3	1.3	N/A	N/A	1.6	1.6	N/A	N/A	2.1	2.1	N/A	N/A
60"	1.4	N/A	N/A	N/A	1.7	N/A	N/A	N/A	2.3	N/A	N/A	N/A

SHEET 1 OF 2

Texas Department of Transportation
Bridge Division

SAFETY END TREATMENT
FOR 12" DIA TO 60" DIA
PIPE CULVERTS
TYPE II ~ CROSS DRAINAGE

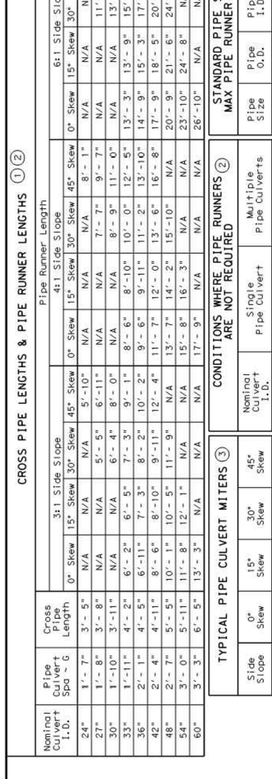
SETP-CD

FILE:	setpcdsa.dgn	DW:	GAF	CK:	CAT	DW:	JBP	CK:	GAF
©TxDOT	May 2005	DISTRICT				FEDERAL AID PROJECT			SHEET
REVISIONS			COUNTY			CONTROL	SECT	JOB	HIGHWAY

SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

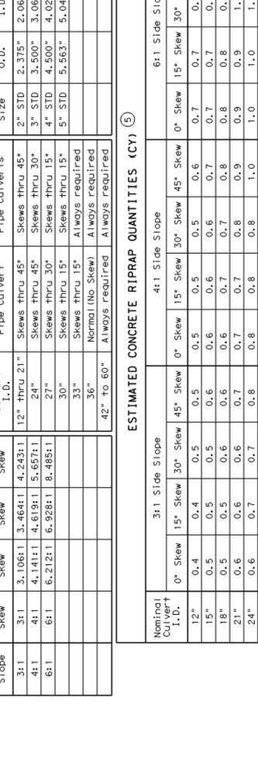
(Showing Corrugated Metal Pipe Culvert. Details of Concrete Pipe Culvert are similar.)

NOTE: All Pipe Runners, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles or mitered angles must be approved and adjustments be made to the values presented on this standard.



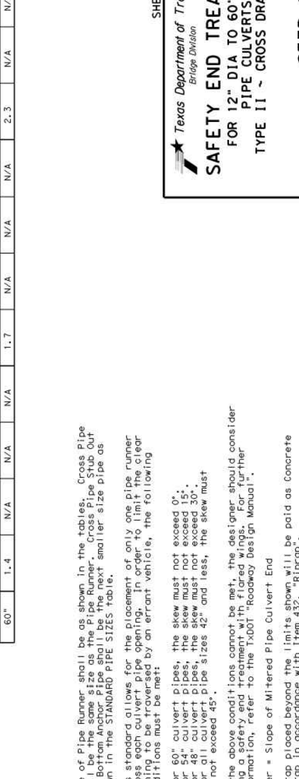
SIDE ELEVATION OF CAST-IN-PLACE CONCRETE

(Showing Concrete Pipe Culvert. Details of Corrugated Metal Pipe Culvert are similar. Pipe Runners not shown for clarity)



ISOMETRIC VIEW OF TYPICAL INSTALLATION

(Showing Installation with no skew.)



(1) Size of Pipe Runner shall be as shown in the tables. Cross Pipe shall be the same size as the Pipe Runner. Cross Pipe Stub Out and Bottom Anchor Pipe shall be the next smaller size pipe as shown in the STANDARD PIPE SIZES table.

(2) This standard allows for the placement of only one pipe runner connection to the culvert. If more than one pipe runner is deemed necessary to be traversed by an errant vehicle, the following conditions must be met:

For 60" culvert pipes, the skew must not exceed 0°.
For 54" culvert pipes, the skew must not exceed 15°.
For 48" culvert pipes, the skew must not exceed 30°.
For all culvert pipes 42" and less, the skew must not exceed 45°.

If the above conditions cannot be met, the designer should consider using a safety end treatment with flared wings. For further information, refer to the TxDOT Roadway Design Manual".

(3) Miter = Slope of Mitered Pipe Culvert End

(4) Riprap placed beyond the limits shown will be paid as Concrete Riprap in accordance with Item 432, "Riprap".

(5) Quantities shown are for one end of one reinforced Concrete Pipe Culvert. For multiple Pipe Culverts or for Corrugated Metal Pipe Culverts, quantities will be adjusted. Riprap quantities are for Contractor's information only.

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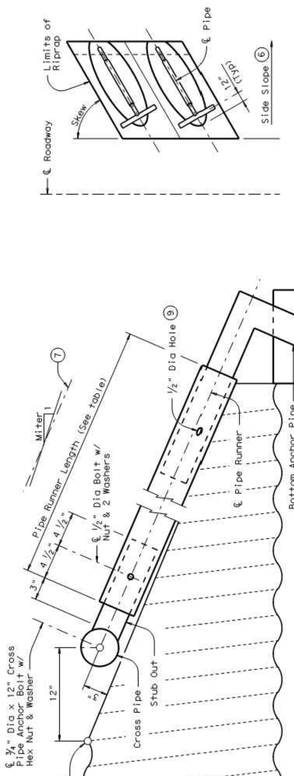
ACCT
LEVELS DISPLAYED

PLAN OF SKEWED INSTALLATION



SIDE ELEVATION OF SAFETY END TREATMENT INSTALLATION

(Showing Pipe Runner with Cross Pipe Connection option A1. Pipe Runner with Bottom Anchor Pipe Connection option B1. Pipe Culvert details are similar. Riprap not shown for clarity)

SAFETY END TREATMENT

(Showing Pipe Runner with Cross Pipe Connection option A1 and Bottom Anchor Pipe Connection option B1. Concrete Pipe Culvert details are similar. Riprap not shown for clarity)

SHOWING CROSS PIPE & ANCHOR TOEWALL

SHOWING TYPICAL PIPE CULVERT & RIPRAP

SECTION A-A

SAFETY END TREATMENT WALL DETAILS

OPTION B2

OPTION B1

BOTTOM ANCHOR TOEWALL DETAILS (10)

(Culvert & Riprap not shown for clarity)

GENERAL NOTES:

Pipe Runners are designed for a traversing load of 1,800 pounds at yield strength. Pipe Runners are designed in accordance with AASHTO Standard Specifications for Highway Bridges, 17th Edition, 2002 and Texas Department of Transportation Bridge Design Manuals. Cross-Drainage Structures', Texas Transportation Institute, March 1981. The Safety End Treatments shown herein are intended for use in those installations where the Pipe Runners are required to traverse the openings approximately perpendicular to the Pipe Runners. Riprap and all necessary inverts shall be Concrete Riprap conforming to the requirements of Item 432, "Riprap". Payment for riprap and toewall is included in the Price Bid for each Safety End Treatment.

Pipe Runners, and Anchor Pipes shall conform to the requirements of ASTM A53 Type E or S, Grade B, ASTM A500 (Grade B), or API 5LX52.

All steel components, except concrete reinforcing, shall be galvanized conforming to ASTM A307.

Pipe Runner joints shall be fabricated by welding as specified for the Anchor Pipe.

All steel components, except concrete reinforcing, shall be galvanized after fabrication. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.

(6) Recommended values of side slope are 3:1, 4:1, & 6:1. All quantities, calculations, and dimensions shown herein are based on these recommended values. Slope of 3:1 or flatter is required for vehicle safety.

(7) Note that actual slope of Pipe Runner may vary slightly from Side Slope of Riprap and Trimmed Culvert Pipe edge.

(8) Care shall be taken to ensure that Riprap concrete does not flow into the Pipe Runner during placement. Disassembly of the bolted connection to allow cleanout access.

(9) After installation, the ½" hole shall be inspected to ensure that the lap of the Pipe Runner with the Bottom Anchor Pipe is adequate.

(10) At fabricator's option, a heat bend to a smooth 5° radius or a manufactured elbow of the same material as the Runner may be substituted for the mitered and welded joint in the Bottom Anchor Pipe.

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ACCT
LEVELS DISPLAYED

SHEET 2 OF 2

Texas Department of Transportation
Bridge Division

SAFETY END TREATMENT
FOR 12" DIA TO 60" DIA
PIPE CULVERTS
TYPE II ~ CROSS DRAINAGE

SETP-CD

FILE:	setpcdsa.dgn	DW:	GAF	CK:	CAT	DW:	JBP	CK:	GAF
©TxDOT	May 2005	DISTRICT				FEDERAL AID PROJECT			SHEET
REVISIONS			COUNTY			CONTROL	SECT	JOB	HIGHWAY

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN: Charalyn Armijo
DATE: 06/01/2020
Glenn Engineering Corporation

Stantec
Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
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PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

ROCKWALL INDEPENDENT SCHOOL DISTRICT

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Issued

Permit-Seal

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

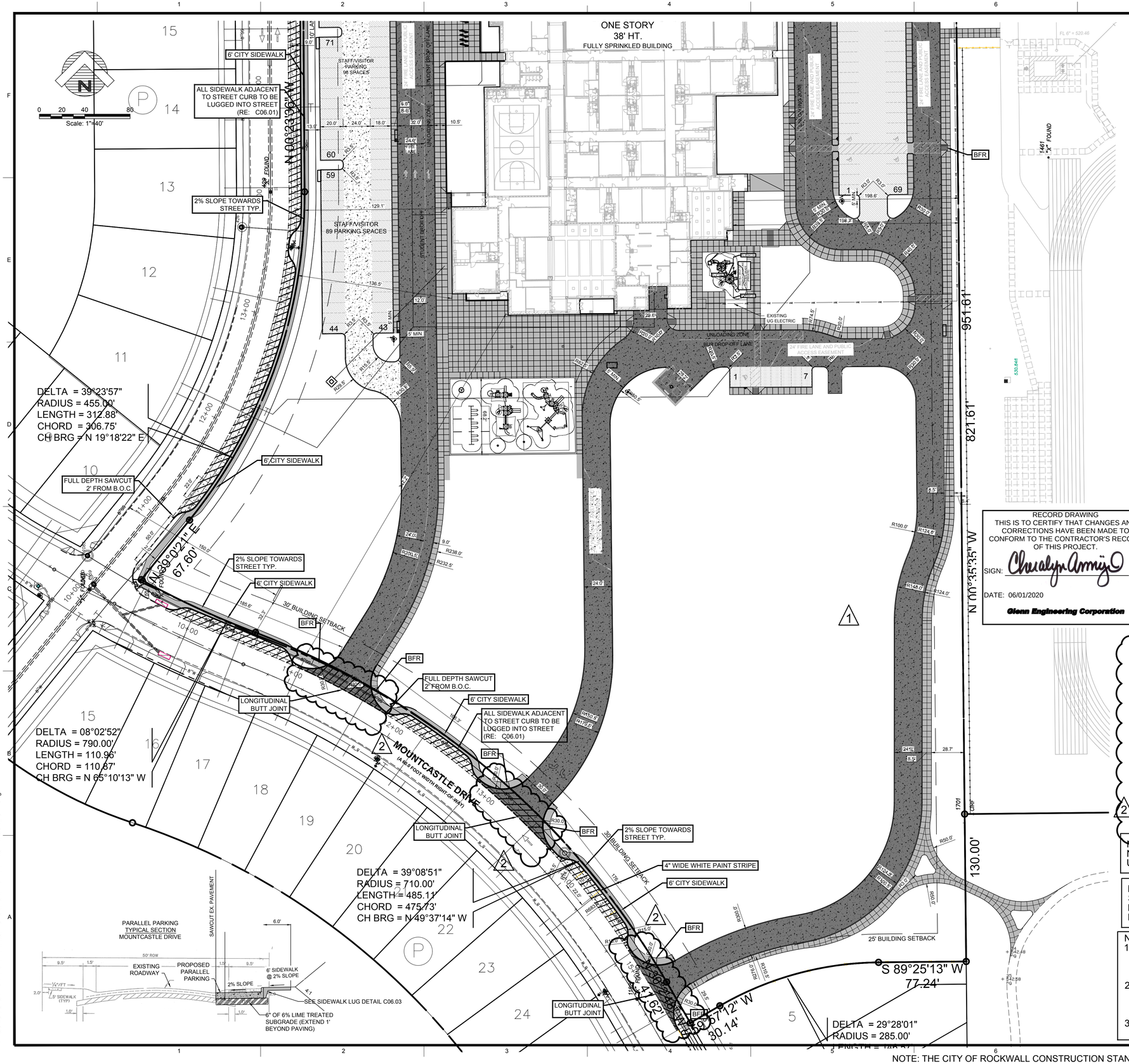
Title
STORM DETAILS 5

Project No.	Scale
214000654	AS SHOWN

Revision: 8
Drawing No.: C 05.17

Plotted: Jun 11, 2020, 10:18 AM by user: john - Saved: 6/1/2020 by user: john
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK DETAILS ONLY.dwg

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.



RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.

SIGN: Chrealyn Arroyo

DATE: 06/01/2020

Glenn Engineering Corporation

GENERAL PAVING NOTES:

THE INITIAL SOIL TEST AND REPORT BY FUGRO SOUTH, INC. PROJECT NO.0703-1081 AND ANY AND ALL SUBSEQUENT REPORTS PREPARED FOR THIS PROJECT BY FUGRO SOUTH OR BY OTHER FIRM, AGENCY OR ENTITY, EVEN THOUGH NO SPECIFIC REFERENCE TO ANY SUCH REPORTS ARE CONTAINED IN THE PLANS AND/OR SPECIFICATIONS FOR THIS PROJECT, ARE MADE A PART OF THIS PLAN. A COPY CAN BE OBTAINED THROUGH THE ARCHITECT OR ENGINEER.

I. PAVEMENT SUB GRADE FOR A & B, BELOW

THE CLAY SOILS ENCOUNTERED NEAR THE EXISTING GROUND SURFACE WILL PROBABLY CONSTITUTE THE SUB GRADE FOR MOST OF THE PARKING AND DRIVE AREAS. THEREFORE, IT IS RECOMMENDED THAT THESE SOILS BE IMPROVED PRIOR TO CONSTRUCTION OF THE PAVEMENTS

IT IS RECOMMENDED THAT THE EXISTING CLAY SOILS IN DRIVE AND PARKING AREAS BE EXCAVATED TO ACHIEVE FINAL SUB GRADE ELEVATION. THE EXPOSED SURFACE OF THE CLAYS SHOULD BE SCARIFIED TO A DEPTH OF AT LEAST 6 INCHES AND MIXED WITH AN ESTIMATED 7 PERCENT OF HYDRATED LIME (BY DRY UNIT WEIGHT) IN CONFORMANCE WITH TEXAS HIGHWAY DEPARTMENT ITEM 260. ASSUMING AN IN-PLACE UNIT WEIGHT OF 100 PCF FOR THE PAVEMENT SUB GRADE SOILS, THIS PERCENTAGE OF LIME EQUATES TO ABOUT 32 LBS OF LIME PER SQ. YARD OF SUB GRADE TREATED. THE ACTUAL AMOUNT OF LIME REQUIRED SHOULD BE DETERMINED BY ADDITIONAL LABORATORY TESTS. IT IS RECOMMENDED THAT THE LIME STABILIZATION PROCEDURES EXTEND AT LEAST 4 FT. BEYOND THE EDGE OF THE PAVEMENT TO MINIMIZE THE EFFECTS OF SEASONAL SHRINKING UPON THE EXTREME EDGES OF PAVEMENT. THE SOIL-LIME MIXTURE SHOULD THEN BE COMPACTED TO AT LEAST 95 PERCENT OF STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D 698) WITHIN 3 PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT. IN ALL AREAS WHERE HYDRATED LIME IS USED TO STABILIZE THE SUB GRADE SOILS, ROUTINE ATTERBERG-LIMIT TESTS SHOULD BE PERFORMED TO ASSURE THAT THE RESULTING PLASTICITY INDEX OF THE SOIL-LIME MIXTURE IS AT/OR BELOW 15.

THE CLIENT SHOULD BE AWARE THAT MECHANICAL LIME STABILIZATION OF THE PAVEMENT SUB GRADE SOILS WILL NOT PREVENT DEEP SEATED MOVEMENT OF THE UNDERLYING UNTREATED MATERIALS. FUTURE MAINTENANCE OF PAVEMENTS SHOULD BE EXPECTED OVER THE LIFE OF THE STRUCTURE.

II. PAVING

CONCRETE DRIVEWAY APPROACHES SHALL BE A MINIMUM OF 6 INCHES THICK. CONCRETE DRIVEWAY APPROACHES SHALL HAVE A RISE OF NOT LESS THAN 6 INCHES NOR MORE THAN 9 INCHES FROM THE FLOW LINE OF THE GUTTER TO A POINT 10 FEET BEHIND THE FACE OF THE GUTTER. CONCRETE FOR DRIVEWAYS SHALL BE A MINIMUM OF 3,600 PSI, MIN. 6.5 SACK MIX, IN 28 DAYS CONCRETE WITH 3-6 PERCENT ENTRAINED AIR. THE GRADE BELOW THE DRIVEWAY, INCLUDING 4 FOOT OUTSIDE OF THE OUTER EDGE OF THE DRIVEWAY SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY, AND AS INDICATED IN THE "PAVEMENT SUB GRADE NOTES".

DRIVEWAYS SHALL HAVE CONTRACTION JOINTS NOT MORE THAN 15 FEET APART, BOTH TRANSVERSELY AND LONGITUDINALLY ONE-HALF INCH EXPANSION JOINT SHALL BE PLACED ON THE PROPERTY LINES BETWEEN THE APPROACH AND THE DRIVEWAY. THE JOINTS SHALL BE FILLED WITH PRE MOLDED GRAY BITUMINOUS EXPANSION JOINT FILLER AND SHALL EXTEND THE ENTIRE DEPTH AND LENGTH OF THE CONCRETE SECTIONS.

A. FINISHING SHALL BE AS INDICATED IN SECTION III.

NOTE: NO CONCRETE SHALL BE PLACED FOR PAVING UNTIL THE SUB GRADE, REINFORCEMENT PLACEMENT HAS BEEN INSPECTED AND APPROVED BY THE CITY OR STATE (WHICHEVER IS APPLICABLE).

B. PARKING LOTS

PARKING LOT SUB GRADE SHALL BE AS INDICATED IN SECTION I.

PAVING SHALL BE 5" REINFORCED CONCRETE IN LIGHT TRAFFIC AREAS AND 6" REINFORCED CONCRETE IN HEAVY TRAFFIC AREAS 3,600 PSI, MIN. 6.5 SACK MIX, IN 28 DAYS CONCRETE WITH 3-6 % ENTRAINED AIR REINFORCED WITH #4 BARS AT 18" O.C.E.W. SUPPORTED WITH PROPER SUPPORT CHAIRS. EXPANSION JOINTS SHALL BE AT 150' MAXIMUM O.C. AND SAW-CUT CONTRACTION JOINTS AT MAXIMUM 15' OC. ALL JOINTS TO BE CLEANED AND FILLED WITH HOT POURED RUBBER (GRAY).

FINISHING SHALL BE AS INDICATED IN SECTION III.

C. ON-SITE SIDEWALKS

CONCRETE SIDEWALKS SHALL BE A WIDTH AS DESIGNATED ON SITE PLAN AND A MINIMUM OF 4 INCHES THICK, CONSTRUCTED OF 3,600 PSI (6.5 SACK), IN 28 DAYS CONCRETE WITH 3-6% ENTRAINED AIR AND REINFORCED WITH #3 BARS AT 18" O.C.E.W. TOOLED CONSTRUCTION JOINTS SHALL BE 5'-0" OC.ONE-HALF INCH EXPANSION JOINT SHALL BE PLACED EVERY 40 FEET AND WHERE NEW WORK IS CONSTRUCTED ADJACENT TO OTHER CONCRETE WORK (WALLS, FOUNDATION, CURB, ETC.). THE JOINTS SHALL BE FILLED WITH 1/2-INCH PRE MOLDED GRAY BITUMINOUS EXPANSION JOINT FILLER AND SHALL EXTEND THE ENTIRE DEPTH AND WIDTH OF THE CONCRETE SECTION.

NISH OF SIDEWALKS SHALL BE WITH A BROOM FINISH PER ENGINEER. WALKS SHALL HAVE OOLED CURB EDGES & TOOLED JOINTS.

. FINISHING FOR CONCRETE DRIVEWAY, PARKING LOT AND STREET CURBS

THE EXPOSED SURFACES OF DRIVEWAYS AND PARKING LOT SHALL HAVE A MONOLITHIC FINISH BY FLOATING WITH A WOODEN FLAT UNTIL A SLIGHT EXCESS OF SAND APPEARS ON THE SURFACES. IN NO CASE SHALL THE SURFACE BE LEFT SLICK OR WITH A GLOSSY FINISH. EXPOSED SURFACES OF SIDEWALKS SHALL HAVE A MONOLITHIC FINISH BY TRAWLING WITH A STEEL TROWEL AND BRUSHED LIGHTLY WITH AN APPROVED BROOM. THE EDGE OF ALL CONCRETE SHALL BE NEATLY ROUNDED TO THE REQUIRED RADII WITH AN EDGING TOOL.

THE EXPOSED SURFACE OF CURBS AND CURBS WITH GUTTER SHALL BE SHAPED WITH A "MULE" AND BRUSHED WITH A WET BRUSH AT RIGHT ANGLE TO THE LINE OF THE CURB TO PRODUCE A UNIFORM TEXTURED SURFACE. THE EDGES SHALL BE NEATLY ROUNDED OFF TO THE REQUIRED RADII. USE OF GROUT OVER A ROUGH FINISHED TEXTURE WILL NOT BE ALLOWED.

PAVING LEGEND

- (FIRE LANE PAVING) PROPOSED 6" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS
- PROPOSED 6" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS
- PROPOSED 5" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS
- PROPOSED 4" REINFORCED CONCRETE SIDEWALK 3,000 PS 5.5 SACK MACHINE FINISH WITH #3 REBARS ON 18" CENTERS EACH WAY.
- PROPOSED 7" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS (PUBLIC STREET PAVING)
- PROPOSED 9" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY. (FIRE LANE PAVING)

PAVING ALTERNATE: DELETE LIME AS CALL OUT ABOVE AND ADD AN ADDITIONAL 1" CONCRETE TO ALL PAVING DEPTH CALL OUT ABOVE.

NOTE:
NO SAND WILL BE PERMITTED UNDER PAVEMENT.

Scale 1" = 30'

NOTE:
SEE LANDSCAPE PLAN LS 1.01 FOR SLEEVES UNDER ALL PAVING WALKS, DRIVES AND PARKING. SEE M.E.P. PLANS ES 1.01 FOR ALL SLEEVE LOCATIONS FOR LIGHTING.

NOTE:
1. ALL DETENTION FACILITIES SHALL BE INSTALLED AND FUNCTIONAL PER PLANS PRIOR TO ANY PAVING BEING PLACED ON SITE INCLUDING BUILDING FOUNDATION.
2. ALL SIDES, SLOPES AND TOP OF DETENTION BASIN SHALL BE SODDED OR ANCHORED ON SEEDED CURLEX PRIOR TO ANY PAVING BEING PLACED INCLUDING BUILDING FOUNDATION.
3. WHERE SIDEWALKS ARE ABUTTING CURB, SIDEWALK WILL BE DOWELED INTO CURB. SEE DETAIL C06.03

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Stantec

Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
Tel: (214) 473-2400 / Fax: (214) 473-2401
www.stantec.com

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PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

ROCKWALL INDEPENDENT SCHOOL DISTRICT

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
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Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER

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Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
PAVING PLAN

Project No.	Scale
214000654	AS SHOWN

Revision: 8
Drawing No.: C 06.00

Plotted: Jun 1, 2020, 2:3 PM by user: john - Saved: 6/1/2020 by user: john
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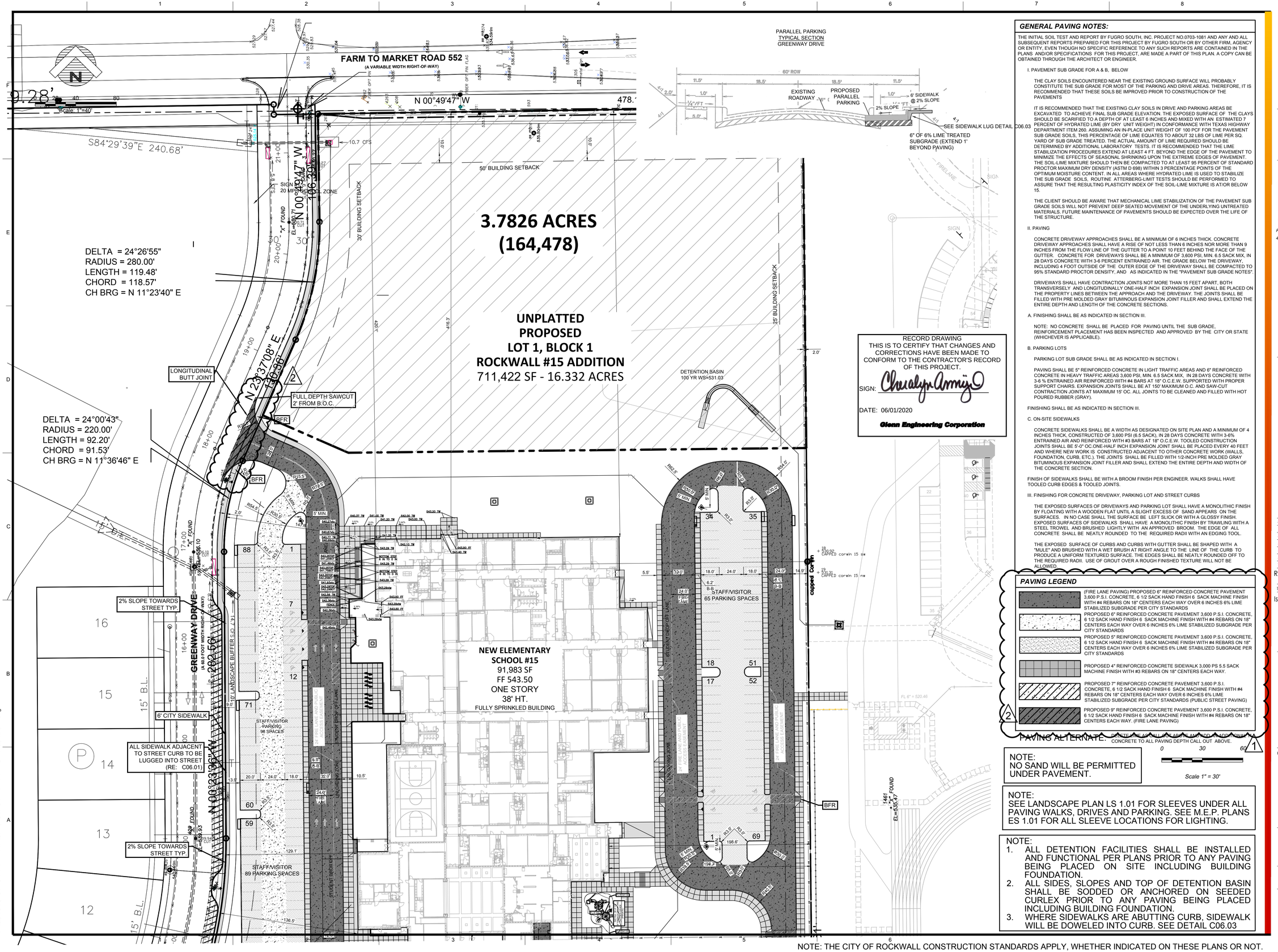

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II. PAVING

CONCRETE DRIVEWAY APPROACHES SHALL BE A MINIMUM OF 6 INCHES THICK. CONCRETE DRIVEWAY APPROACHES SHALL HAVE A RISE OF NOT LESS THAN 6 INCHES NOR MORE THAN 9 INCHES FROM THE FLOW LINE OF THE GUTTER TO A POINT 10 FEET BEHIND THE FACE OF THE GUTTER. CONCRETE FOR DRIVEWAYS SHALL BE A MINIMUM OF 3,600 PSI, MIN. 6.5 SACK MIX, IN 28 DAYS CONCRETE WITH 3-6 PERCENT ENTRAINED AIR. THE GRADE BELOW THE DRIVEWAY, INCLUDING 4 FOOT OUTSIDE OF THE OUTER EDGE OF THE DRIVEWAY SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY, AND AS INDICATED IN THE "PAVEMENT SUB GRADE NOTES".

DRIVEWAYS SHALL HAVE CONTRACTION JOINTS NOT MORE THAN 15 FEET APART, BOTH TRANSVERSELY AND LONGITUDINALLY ONE-HALF INCH EXPANSION JOINT SHALL BE PLACED ON THE PROPERTY LINES BETWEEN THE APPROACH AND THE DRIVEWAY. THE JOINTS SHALL BE FILLED WITH PRE MOLDED GRAY BITUMINOUS EXPANSION JOINT FILLER AND SHALL EXTEND THE ENTIRE DEPTH AND LENGTH OF THE CONCRETE SECTIONS.

A. FINISHING SHALL BE AS INDICATED IN SECTION III.

NOTE: NO CONCRETE SHALL BE PLACED FOR PAVING UNTIL THE SUB GRADE, REINFORCEMENT PLACEMENT HAS BEEN INSPECTED AND APPROVED BY THE CITY OR STATE (WHICHEVER IS APPLICABLE).

B. PARKING LOTS

PARKING LOT SUB GRADE SHALL BE AS INDICATED IN SECTION I.

PAVING SHALL BE 5" REINFORCED CONCRETE IN LIGHT TRAFFIC AREAS AND 6" REINFORCED CONCRETE IN HEAVY TRAFFIC AREAS 3,600 PSI, MIN. 6.5 SACK MIX, IN 28 DAYS CONCRETE WITH 3-6 % ENTRAINED AIR REINFORCED WITH #4 BARS AT 18" O.C.E.W. SUPPORTED WITH PROPER SUPPORT CHAIRS. EXPANSION JOINTS SHALL BE AT 150' MAXIMUM O.C. AND SAW-CUT CONTRACTION JOINTS AT MAXIMUM 15' OC. ALL JOINTS TO BE CLEANED AND FILLED WITH HOT POURED RUBBER (GRAY).

FINISHING SHALL BE AS INDICATED IN SECTION III.

C. ON-SITE SIDEWALKS

CONCRETE SIDEWALKS SHALL BE A WIDTH AS DESIGNATED ON SITE PLAN AND A MINIMUM OF 4 INCHES THICK, CONSTRUCTED OF 3,600 PSI (6.5 SACK), IN 28 DAYS CONCRETE WITH 3-6% ENTRAINED AIR AND REINFORCED WITH #3 BARS AT 18" O.C.E.W. TOOLED CONSTRUCTION JOINTS SHALL BE 5'-0" OC.ONE-HALF INCH EXPANSION JOINT SHALL BE PLACED EVERY 40 FEET AND WHERE NEW WORK IS CONSTRUCTED ADJACENT TO OTHER CONCRETE WORK (WALLS, FOUNDATION, CURB, ETC.). THE JOINTS SHALL BE FILLED WITH 1/2-INCH PRE MOLDED GRAY BITUMINOUS EXPANSION JOINT FILLER AND SHALL EXTEND THE ENTIRE DEPTH AND WIDTH OF THE CONCRETE SECTION.

FINISH OF SIDEWALKS SHALL BE WITH A BROOM FINISH PER ENGINEER. WALKS SHALL HAVE TOOLED CURB EDGES & TOOLED JOINTS.

III. FINISHING FOR CONCRETE DRIVEWAY, PARKING LOT AND STREET CURBS

THE EXPOSED SURFACES OF DRIVEWAYS AND PARKING LOT SHALL HAVE A MONOLITHIC FINISH BY FLOATING WITH A WOODEN FLAT UNTIL A SLIGHT EXCESS OF SAND APPEARS ON THE SURFACES. IN NO CASE SHALL THE SURFACE BE LEFT SLICK OR WITH A GLOSSY FINISH. EXPOSED SURFACES OF SIDEWALKS SHALL HAVE A MONOLITHIC FINISH BY TRAWLING WITH A STEEL TROWEL AND BRUSHED LIGHTLY WITH AN APPROVED BROOM. THE EDGE OF ALL CONCRETE SHALL BE NEATLY ROUNDED TO THE REQUIRED RADII WITH AN EDGING TOOL.

THE EXPOSED SURFACE OF CURBS AND CURBS WITH GUTTER SHALL BE SHAPED WITH A "MULE" AND BRUSHED WITH A WET BRUSH AT RIGHT ANGLE TO THE LINE OF THE CURB TO PRODUCE A UNIFORM TEXTURED SURFACE. THE EDGES SHALL BE NEATLY ROUNDED OFF TO THE REQUIRED RADII. USE OF GROUT OVER A ROUGH FINISHED TEXTURE WILL NOT BE ALLOWED.

PAVING LEGEND

- (FIRE LANE PAVING) PROPOSED 6" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS
- PROPOSED 6" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS
- PROPOSED 5" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS
- PROPOSED 4" REINFORCED CONCRETE SIDEWALK 3,000 PS 5.5 SACK MACHINE FINISH WITH #3 REBARS ON 18" CENTERS EACH WAY.
- PROPOSED 7" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY OVER 6 INCHES 6% LIME STABILIZED SUBGRADE PER CITY STANDARDS (PUBLIC STREET PAVING)
- PROPOSED 9" REINFORCED CONCRETE PAVEMENT 3,600 P.S.I. CONCRETE, 6 1/2 SACK HAND FINISH 6 SACK MACHINE FINISH WITH #4 REBARS ON 18" CENTERS EACH WAY. (FIRE LANE PAVING)

PAVING ALTERNATE: DELETE 4" ASPHALT ABOVE AND ADD 4" ADDITIONAL CONCRETE TO ALL PAVING DEPTH CALL OUT ABOVE.

NOTE:
NO SAND WILL BE PERMITTED UNDER PAVEMENT.

NOTE:
SEE LANDSCAPE PLAN LS 1.01 FOR SLEEVES UNDER ALL PAVING WALKS, DRIVES AND PARKING. SEE M.E.P. PLANS ES 1.01 FOR ALL SLEEVE LOCATIONS FOR LIGHTING.

NOTE:
1. ALL DETENTION FACILITIES SHALL BE INSTALLED AND FUNCTIONAL PER PLANS PRIOR TO ANY PAVING BEING PLACED ON SITE INCLUDING BUILDING FOUNDATION.
2. ALL SIDES, SLOPES AND TOP OF DETENTION BASIN SHALL BE SODDED OR ANCHORED ON SEEDED CURLEX PRIOR TO ANY PAVING BEING PLACED INCLUDING BUILDING FOUNDATION.
3. WHERE SIDEWALKS ARE ABUTTING CURB, SIDEWALK WILL BE DOWELED INTO CURB. SEE DETAIL C06.03

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

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Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Issued

Permit-Seal
STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER
The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD
Elementary School #15
2911 Greenway Drive
Rockwall, TX 75087

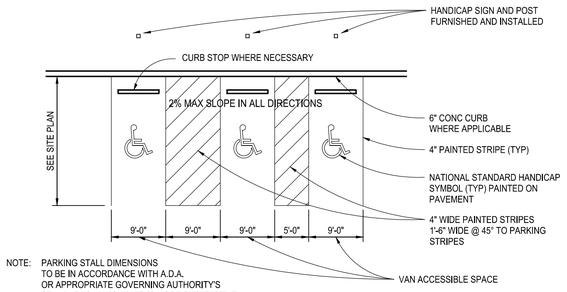
Title
PAVING PLAN

Project No.	Scale
214000654	AS SHOWN

Revision 8

Drawing No. C06.00A

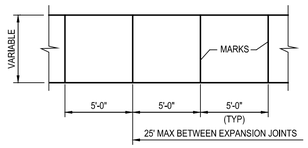
Plotted: Jun 1, 2020, 2:3 PM by user: john - Saved: 6/1/2020 by user: john
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK ELEM ENG - RECORD SET.dwg



NOTE: PARKING STALL DIMENSIONS TO BE IN ACCORDANCE WITH A.D.A. OR APPROPRIATE GOVERNING AUTHORITY'S STANDARDS, WHICHEVER IS MORE RESTRICTIVE. MAX SLOPE 2%.

ACCESSIBLE PARKING STALL DETAILS

NOT TO SCALE



NOTES:

1. AT MARKINGS THE CONCRETE SHALL BE A TOOLED JOINT 3/4" DEEP, FOLLOWED BY GROOVING TOOL. STRENGTH SHALL BE 3000 p.s.i. WITH #3 BARS @ 18" O.C.
2. SIDEWALKS ADJACENT TO BUILDING TO BE PLACED ON LIME TREATED SUBGRADE THE SAME AS PAVING ALL OTHER SIDEWALKS TO BE PLACED OVER 1" MAX COMPACTED SAND. (PI < 15)

SIDEWALK PLAN

NTS

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.

SIGN: Charalyn Armijo

DATE: 06/01/2020

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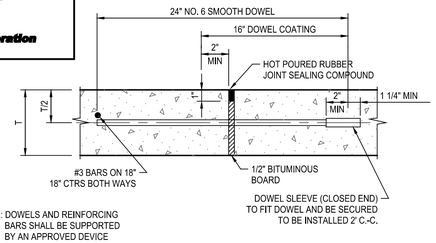
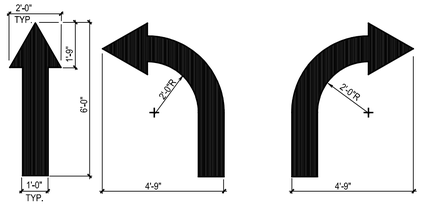


NOTE: DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE

EXPANSION JOINT DETAIL

NTS MAXIMUM SPACING = 150 FEET

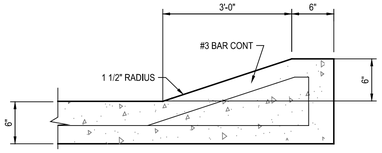


ALL FLOW ARROWS TO BE SOLID YELLOW REFLECTIVE TRAFFIC PAINT AS PER DIMENSIONS ABOVE.

REVERSE ARROWS FOR OPPOSITE DIRECTION OF FLOW.

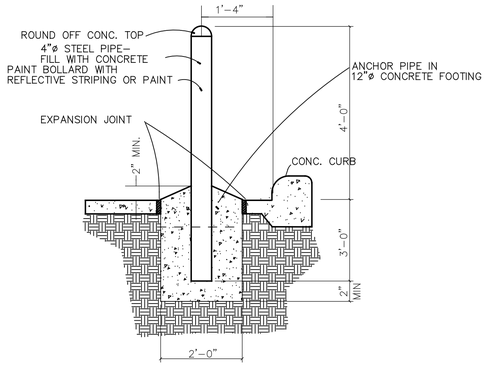
PAINTED TRAFFIC ARROWS

NOT TO SCALE



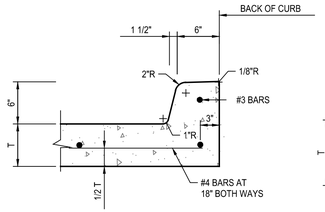
TYPICAL ROLL-OVER CURB

NTS



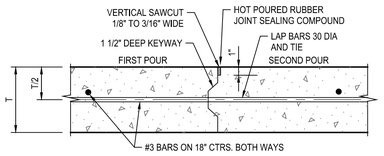
STEEL PIPE BOLLARD DETAIL

NOT TO SCALE



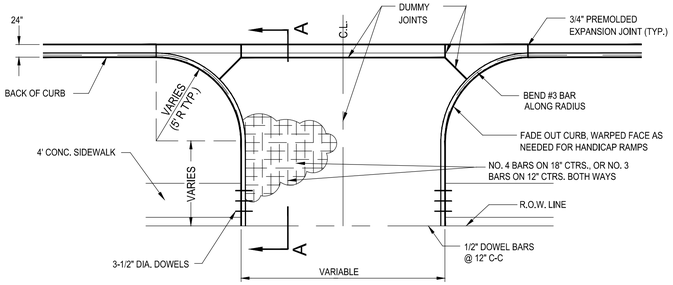
INTEGRAL CURB & GUTTER

NTS



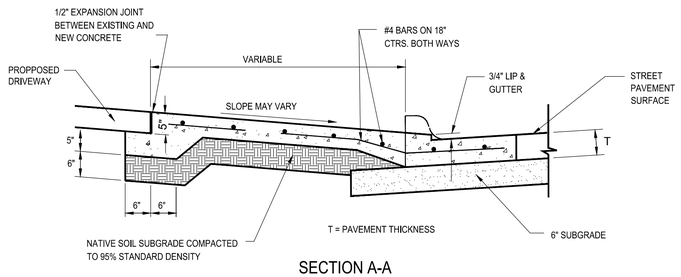
CONSTRUCTION JOINT DETAIL (L)

NTS



TYPICAL DRIVE APPROACH

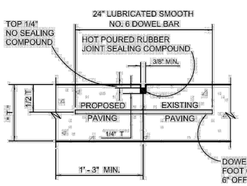
SCALE: 1/8" = 1'-0"



SECTION A-A
(FOR TYPICAL DRIVE APPROACH)

SCALE: 3/4" = 1'-0"

City of Rockwall
Texas



NOTES: T = PAVEMENT

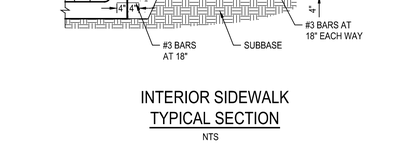
1. LONGITUDINAL BUTT CONSTRUCTION MAY BE UTILIZED IN PLACE OF LONGITUDINAL HINGED (KEYWAY) JOINT AT CONTRACTORS OPTION.
2. DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG.

   DRILLING BY HAND IS NOT ACCEPTABLE, PUSHING DOWEL BARS INTO GREEN CONCRETE NOT ACCEPTABLE.

LONGITUDINAL BUTT JOINT

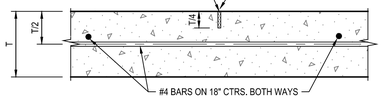
NOT TO SCALE

REINFORCED CONCRETE PAVEMENT	CITY OF ROCKWALL	
LONGITUDINAL BUTT JOINT		DATE: AUG. '15 / DRAWING NO. R-2051



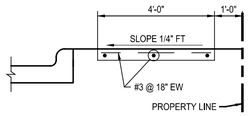
INTERIOR SIDEWALK
TYPICAL SECTION

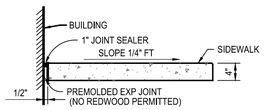
NTS



NTS MAXIMUM SPACING = 15 FEET

SAWED DUMMY JOINT DETAIL (T)

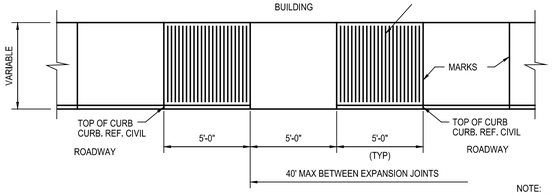




WALK/BUILDING/CURB
INTERFACE

NTS

1/8" DEEP GROOVES 1/4" TO 3/4" WIDE AT 3/4" TO 2" O.C. GROOVES SHALL BE ARRANGED TO PREVENT WATER FROM ACCUMULATING. (PAVING TO BE STAINED A CONTRASTING COLOR ON GROOVE PATTERN) (TYPICAL BOTH SIDES)



NOTES:

1. AT MARKINGS THE CONCRETE SHALL BE A TOOLED JOINT 3/4" DEEP, FOLLOWED BY GROOVING TOOL. STRENGTH SHALL BE 3600 p.s.i. WITH #3 BARS @ 18" O.C.
2. SIDEWALKS ADJACENT TO BUILDING TO BE PLACED ON LIME TREATED SUBGRADE THE SAME AS PAVING ALL OTHER SIDEWALKS TO BE PLACED OVER 2" COMPACTED SELECT FILL. (PI < 15)

*NO SAND TO BE USED UNDER PUBLIC SIDEWALKS

NOTE: ALL ADA REQUIREMENTS SHALL MEET STATE AND FEDERAL STANDARDS.

SIDEWALK PLAN

NTS

PRIVATE PAVING DETAILS

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Plotted: Jun 1, 2020, 2:33 PM by user: john - Saved: 7/12/2019 by user: john
R:\ROCKISD\STONE CREEK ELEM\BIDSET\STONE CREEK DETAILS ONLY.dwg

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Notes

ROCKWALL INDEPENDENT SCHOOL DISTRICT

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
5 - RFI #20 AND #21	RAH	CMG	2019.07.23
4 - RFI #16	RAH	CMG	2019.07.12
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2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Issued

Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project

Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title

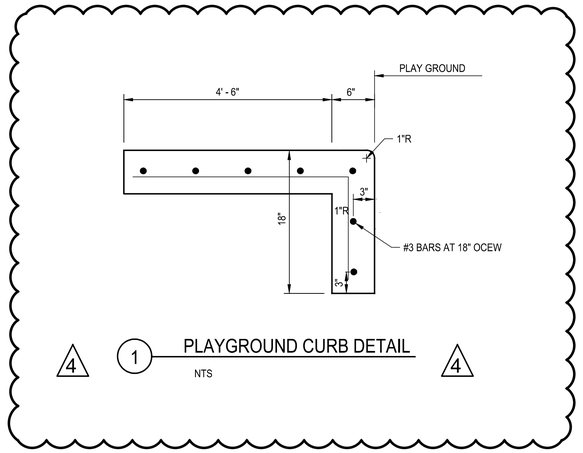
PAVING DETAILS 1

Project No. 214000654

Scale AS SHOWN

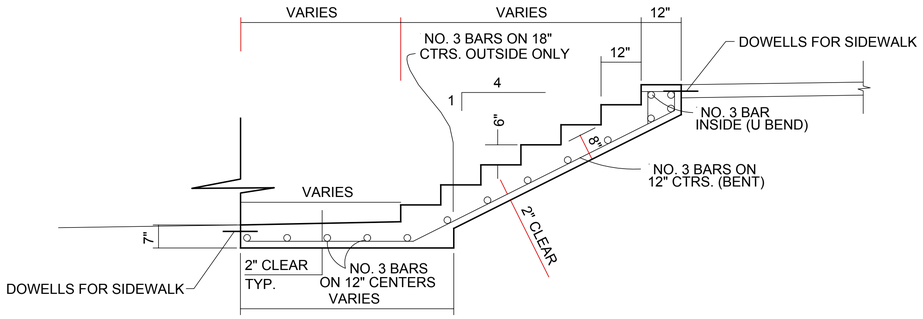
Revision 8

Drawing No. C 06.01



4 1 PLAYGROUND CURB DETAIL 4

NTS

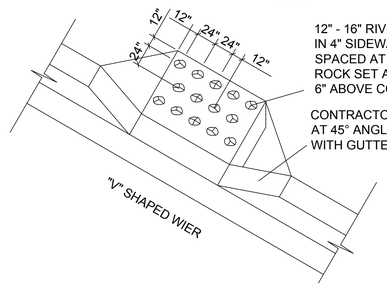


SECTION A-A
TYPE 2 STEPS

GENERAL NOTES

1. CONCRETE FOR STEPS TO BE CLASS A CONCRETE.
2. BARS SHALL CONFORM TO SECTION 2.2.6 OF THE NCTCOG SPECIFICATIONS.
3. BAR LAPS SHALL BE 30 DIAMETERS.
4. ALL EXPOSED SURFACES EXCEPT STEP TREADS AND WALK SHALL RECEIVE A RUBBED FINISH.
5. STEP TREADS AND WALK SHALL RECEIVE A NON-SKID WOOD FLOAT FINISH.
6. WIDTH OF TREAD AND/OR DEPTH OF RISE OF ALL STEPS MAY BE MODIFIED IF SO INDICATED ON THE PLANS.
7. EXPANSION JOINTS SHALL BE COMPOSED OF 1/2" PREMOLDED JOINT FILLER.

1



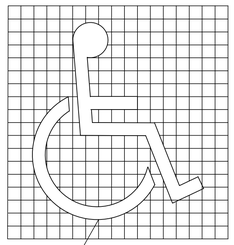
SECTION "B-B"
RIVER ROCK ENERGY DISSIPATER

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.

SIGN: Charalyn Armijo

DATE: 06/01/2020

Glenn Engineering Corporation



NOTE: GRID FOR LAYOUT PURPOSES ONLY.

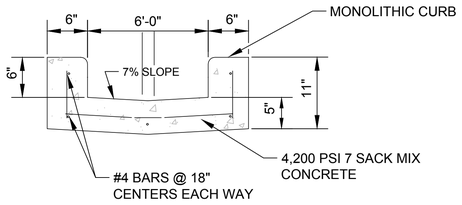
PAINT IN ACCORDANCE WITH "STATE OF TEXAS ACCESSIBILITY STANDARDS"

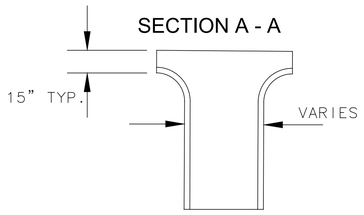
ACCESSIBLE SYMBOL DETAIL

NTS

NOTES:

1. FLUME NEEDS TO BE FLARED AT ENTRANCE ONLY FOR HYDRAULIC PURPOSES.





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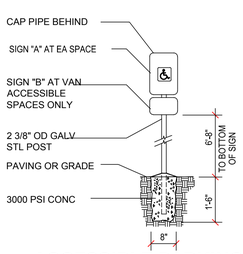
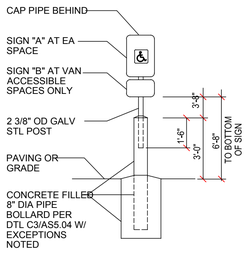


ACCESSIBLE PARKING SIGN DETAIL

NTS



ACCESSIBLE PARKING SIGN DETAIL

NTS

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4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
8 - RFI #40	RAH	CMG	2020.05.13
7 - RFI #79 - PC 20 - REV	RAH	CMG	2020.03.13
6 - RFI #116 AND #117	RAH	CMG	2020.01.13
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3 - CITY COMMENTS	RAH	CMG	2019.04.30
2 - ASI #1 -CITY COMMENTS	RAH	CMG	2019.04.02

Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal

STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER

The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project

Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title

PAVING DETAILS 2

Project No.	Scale
214000654	AS SHOWN

Revision	Drawing No.
8	C 06.02

Plotted: Jun 1, 2020, 2:34 PM by user: john - Saved: 7/12/2019 by user: john
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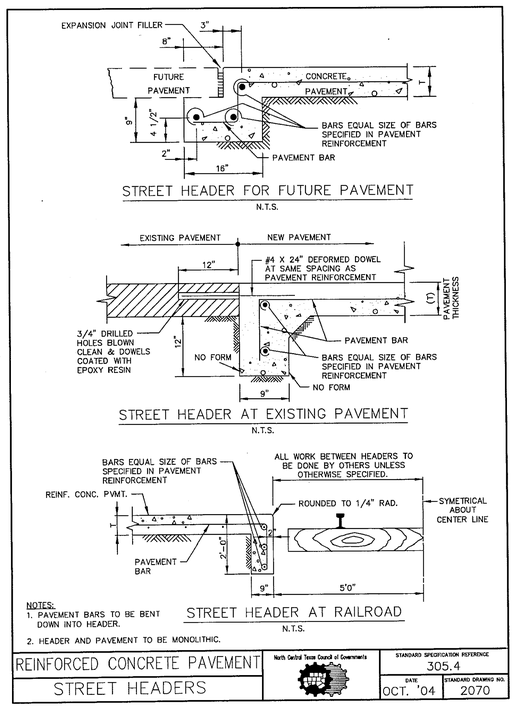
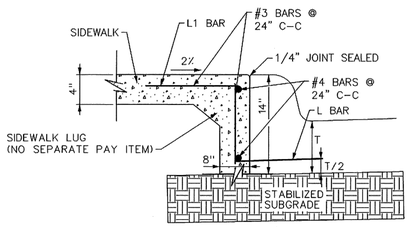


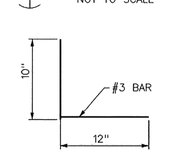
NOTES:
1. PAVEMENT BARS TO BE BENT DOWN INTO HEADER.
2. HEADER AND PAVEMENT TO BE MONOLITHIC.

REINFORCED CONCRETE PAVEMENT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 305.4
STREET HEADERS		DATE OCT. '04 / STANDARD DRAWING NO. 2070

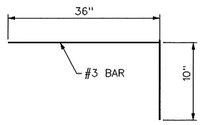
*MODIFICATIONS
1. THE RAILWAY HEADER IS TO HAVE A TWO (2) INCH NOTCH INTO THE CONCRETE PAVEMENT FOR THE INSTALLATION OF A HMAC OVERLAY. THE CONCRETE UNDER THE HMAC IS TO BE THE FULL STREET THICKNESS. THE NOTCH SHOULD START AT THE END OF THE PAVEMENT AND GO TWENTY (20) FEET UP THE ROADWAY FROM THE CROSSING.



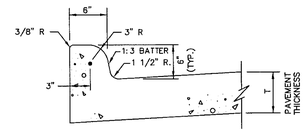
SIDEWALK LUG DETAIL
NOT TO SCALE



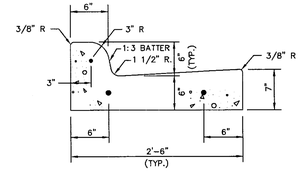
L BAR
NOT TO SCALE



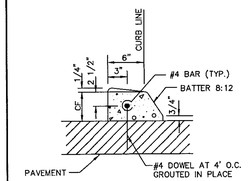
L1 BAR
NOT TO SCALE



INTEGRAL CURB & GUTTER
N.T.S.



SEPARATE CURB & GUTTER
N.T.S.



DOWELED CURB
N.T.S.

NOTES:
1. REINFORCEMENT SHALL BE NO. 4 BARS, UNLESS OTHERWISE SPECIFIED.
2. CONCRETE SHALL BE CLASS "C" OR "PC".
3. "CF" IS 6" UNLESS OTHERWISE SPECIFIED.
4. ALL CURBS ARE CONSTRUCTED OF PORTLAND CEMENT CONCRETE UNLESS OTHERWISE SHOWN.
5. GRADE SHALL BE MEASURED AT BACK OF CURB.

CONCRETE CURB & GUTTER INTEGRAL, SEPARATE, & DOWELED	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE 305.1
		DATE OCT. '04 / STANDARD DRAWING NO. 2120

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN:
DATE: 06/01/2020
Glenn Engineering Corporation

NCTCOG DETAILS HAVE BEEN MODIFIED BY THE CITY OF ROCKWALL. SEE NOTES DESIGNATED *MODIFICATIONS FOR THOSE REVISED.

NOTE: THE CITY OF ROCKWALL CONSTRUCTION STANDARDS APPLY, WHETHER INDICATED ON THESE PLANS OR NOT.

Stantec
Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
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GLENN ENGINEERING
T.B.P.E. FIRM REGISTRATION NO. F - 303
PHONE 972-717-5151 FAX 972-717-2176
4500 FULLER DRIVE - SUITE 220 IRVING, TEXAS 75038

Notes

Revision	By	Appd	YYYY.MM.DD
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Issued	By	Appd	YYYY.MM.DD
100%CD - For Bidding and Construction	RAH	CMG	2019.03.01

Permit-Seal
STATE OF TEXAS
MIKE GLENN
35059
LICENSED PROFESSIONAL ENGINEER
The seal appearing on this document was authorized by Mike Glenn, P.E. 35059, on May 13, 2020

Client/Project
Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
CITY PAVING DETAILS

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 06.03

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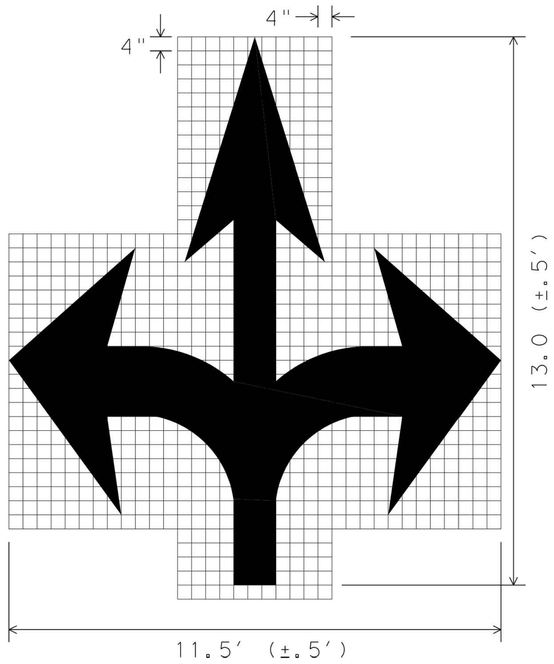
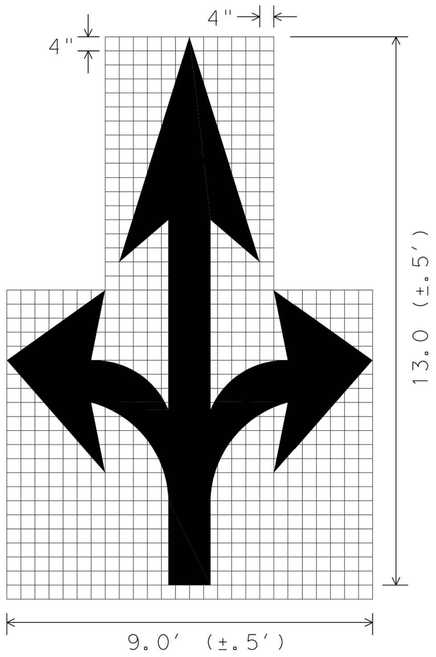
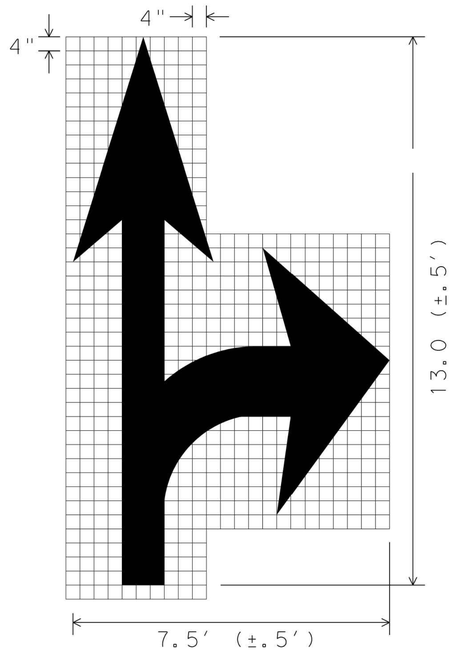
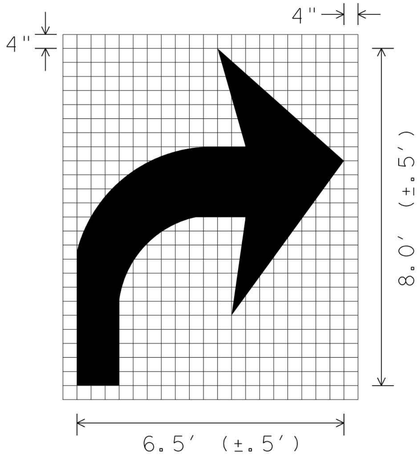
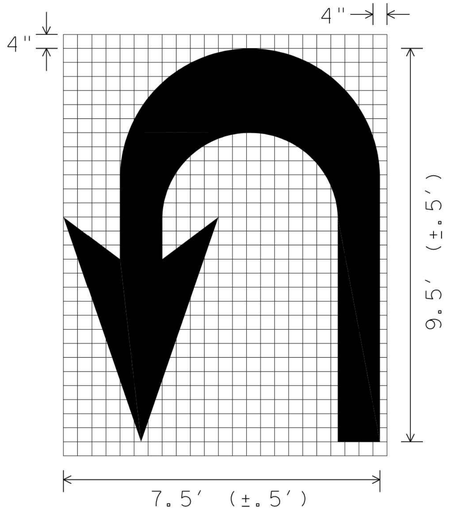
EJ – Expansion Joint *(See 2170MA for more details)*
CJ – Construction Joint
– – – –

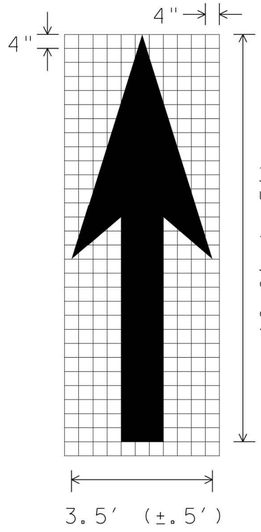


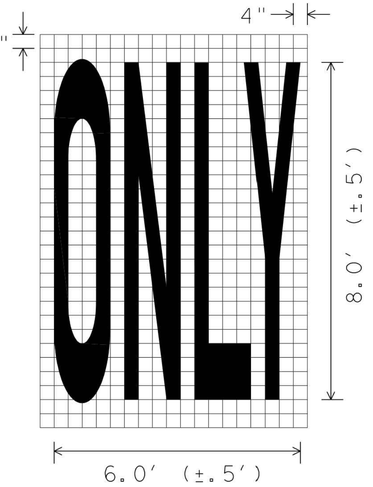












GENERAL NOTES;

1. Minimum 8 foot white markings should be used, unless otherwise noted. If message consists of more than one word, it should be placed with first word nearest the driver.
2. These details are standard size for normal installation; sizes may be reduced approximately one-third for low speed urban conditions; larger sizes may be needed for freeways, above average speed conditions or other critical locations.
3. The longitudinal space between markings should be at least four times the height of the markings, on low speed roads, but should not exceed ten times the height under any condition.
4. Markings considered appropriate for use when warranted include the following:
   A. Regulatory
      STOP
      RIGHT (LEFT) TURN ONLY
      25 MPH
      SYMBOL ARROWS
   B. Warning
      STOP AHEAD
      SIGNAL AHEAD
      SCHOOL
      SCHOOL X-ING
      PED X-ING
      R X R (see RCPM standard)
   C. Guide
      US XXX
      ROUTE XXX
      STATE XXX
      Other words or symbols may be necessary under certain conditions
5. Uncontrolled use of pavement markings can result in driver confusion. Word and symbol markings should be no more than three lines.
6. The word "STOP" shall not be used on the pavement unless accompanied by a Stop line and Stop sign. The word "STOP" shall not be placed on the pavement in advance to a stop line, unless every vehicle is required to stop at all times.
7. Pavement markings should generally be no more than one lane in width, with School messages being the exception. For details of School and School crossing pavement markings, refer to Part VII of the "Texas Manual on Uniform Traffic Control Devices".
8. Spacing between letters should be approximately 4 inches. The width of letters may vary depending on the width of the travel lanes.
9. Lane-Use arrow markings may be used to convey either guidance or mandatory messages. Arrows used to convey a mandatory movement must be accompanied by standard signs and the pavement marking word "ONLY".
10. Pavement markings are to be located as specified elsewhere in the plans.

SPACING BETWEEN LINES OF PAVEMENT MARKINGS	
MPH	SPACING
≤ 45	MINIMUM 4 TIMES THE LETTER HEIGHT
> 45	MINIMUM - 4 TIMES THE LETTER HEIGHT MAXIMUM - 10 TIMES THE LETTER HEIGHT

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

STANDARD PAVEMENT MARKINGS (ARROWS)

PM(6)-01

© TxDOT March 2001	DN: -	CK: GRB	DW: FDN	CK: CAL
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
		6		
COUNTY		CONTROL	SECTION	JOB	HIGHWAY

22H

RECORD DRAWING
THIS IS TO CERTIFY THAT CHANGES AND CORRECTIONS HAVE BEEN MADE TO CONFORM TO THE CONTRACTOR'S RECORD OF THIS PROJECT.
SIGN: Charalyn Armijo
DATE: 06/01/2020
Glenn Engineering Corporation

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LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

Stantec
Stantec Architecture Inc.
5717 Legacy Drive Suite 250
Plano, TX 75024-4246
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Rockwall ISD

Elementary School #15

2911 Greenway Drive
Rockwall, TX 75087

Title
PAVING MARKINGS

Project No. 214000654
Scale AS SHOWN
Revision 8
Drawing No. C 06.06

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