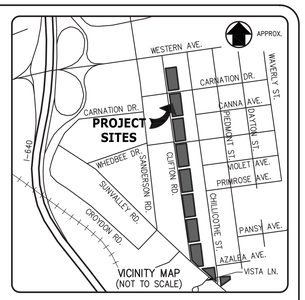
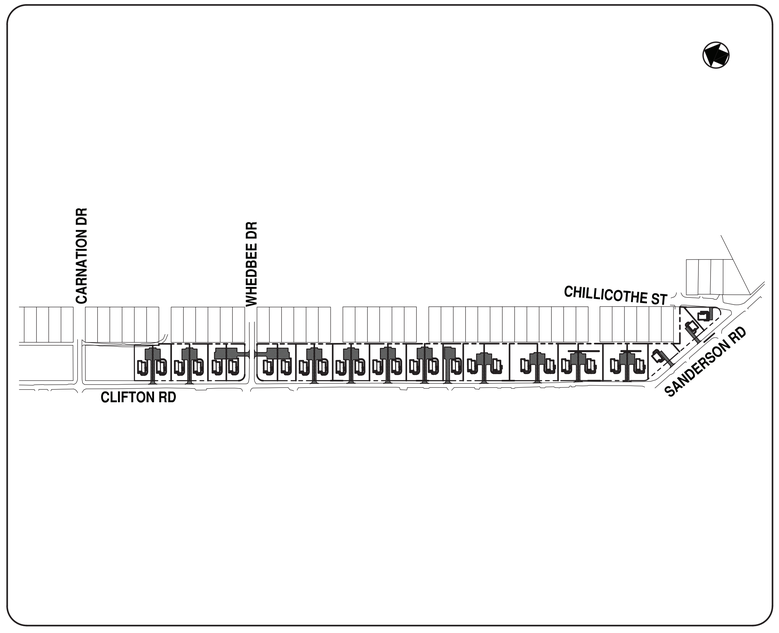
CLIFTON ROAD DEVELOPMENT

404 CLIFTON ROAD

KNOXVILLE, TENNESSEE



DRAWING INDEX



LOCATION MAP
N.T.S.

PROPERTY DATA	
PROPERTY OWNER	*PARCELS 11.00 (BLK #23181), 12.00 (BLK #23182), & 01.00 (BLK #23161)* *THE CITY OF KNOXVILLE* *400 MAIN STREET* *KNOXVILLE, TENNESSEE 37902* *CITY WARD 23, CLT MAP 93, INSERT L, GROUP B* *PARCELS 41.00 (BLK #23162), 42.00 (BLK #23121), & 01.00 (BLK #23122)* *THE CITY OF KNOXVILLE* *400 MAIN STREET* *KNOXVILLE, TENNESSEE 37902* *CITY WARD 23, CLT MAP 93, INSERT E, GROUP H* *PARCELS 37.00 (BLK #23081), 1.01 (BLK #23082), & 1.02 (BLK #23082)* *THE CITY OF KNOXVILLE* *400 MAIN STREET* *KNOXVILLE, TENNESSEE 37902* *CITY WARD 23, CLT MAP 93, INSERT E, GROUP D* *PARCEL 23.00 (BLK #23083)* *THE CITY OF KNOXVILLE* *400 MAIN STREET* *KNOXVILLE, TENNESSEE 37902* *CITY WARD 23, CLT MAP 93, INSERT D, GROUP G*
ZONING	*R1–A, "LOW DENSITY RESIDENTIAL DISTRICT"*
AREA	*7.7 AC. TOTAL*

REVISIONS	DATE
1 REVISED PER CITY OF KNOXVILLE COMMENTS	12/12/2018

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

CLIENT:
KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION
901 N. BROADWAY ST.
KNOXVILLE, TENNESSEE 37917

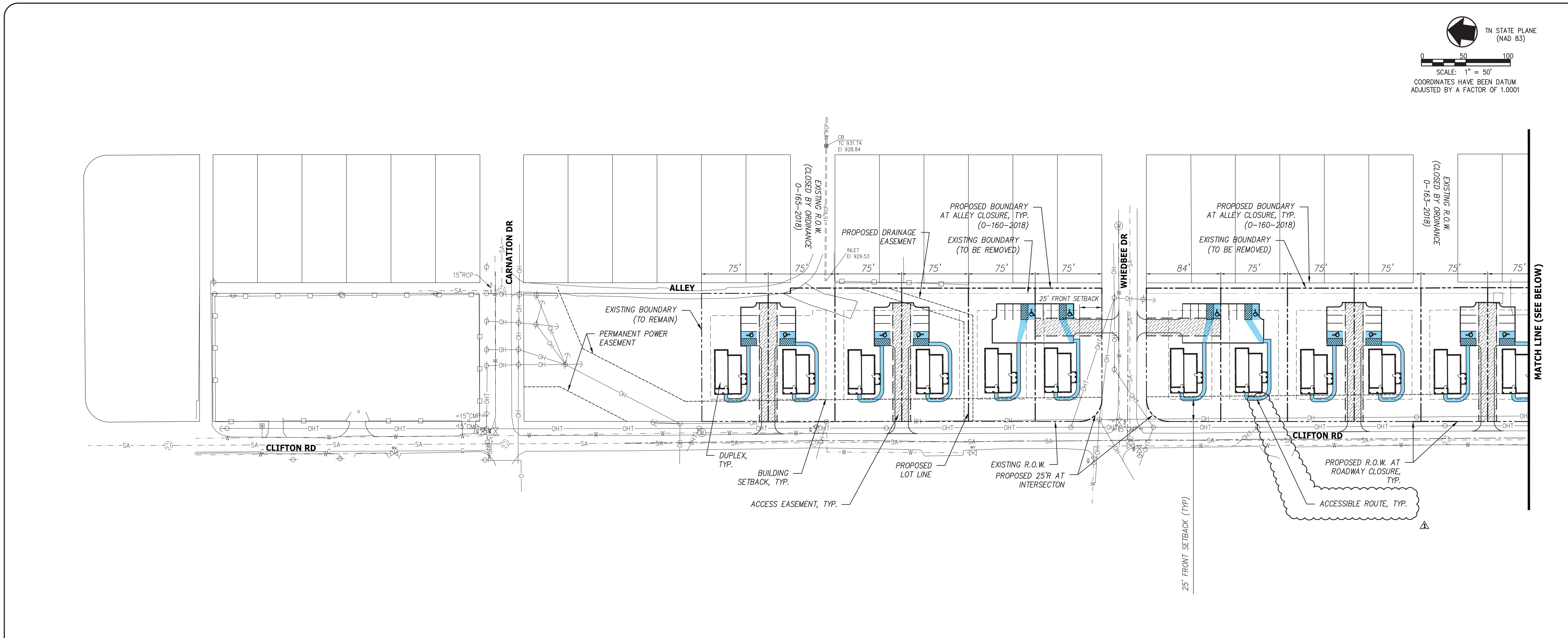
PROJECT:
CLIFTON ROAD DEVELOPMENT
404 CLIFTON ROAD 1
KNOXVILLE, TENNESSEE

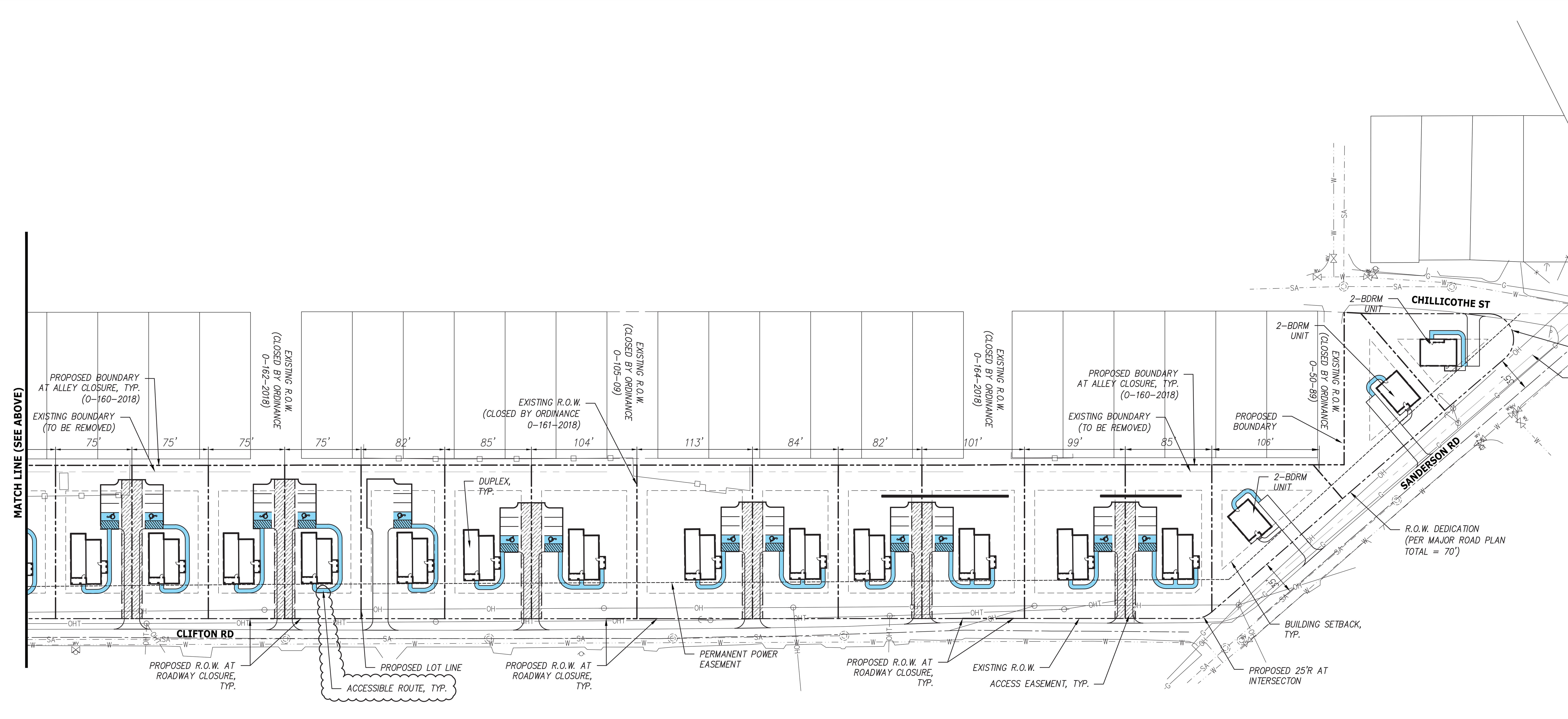
COVER SHEET

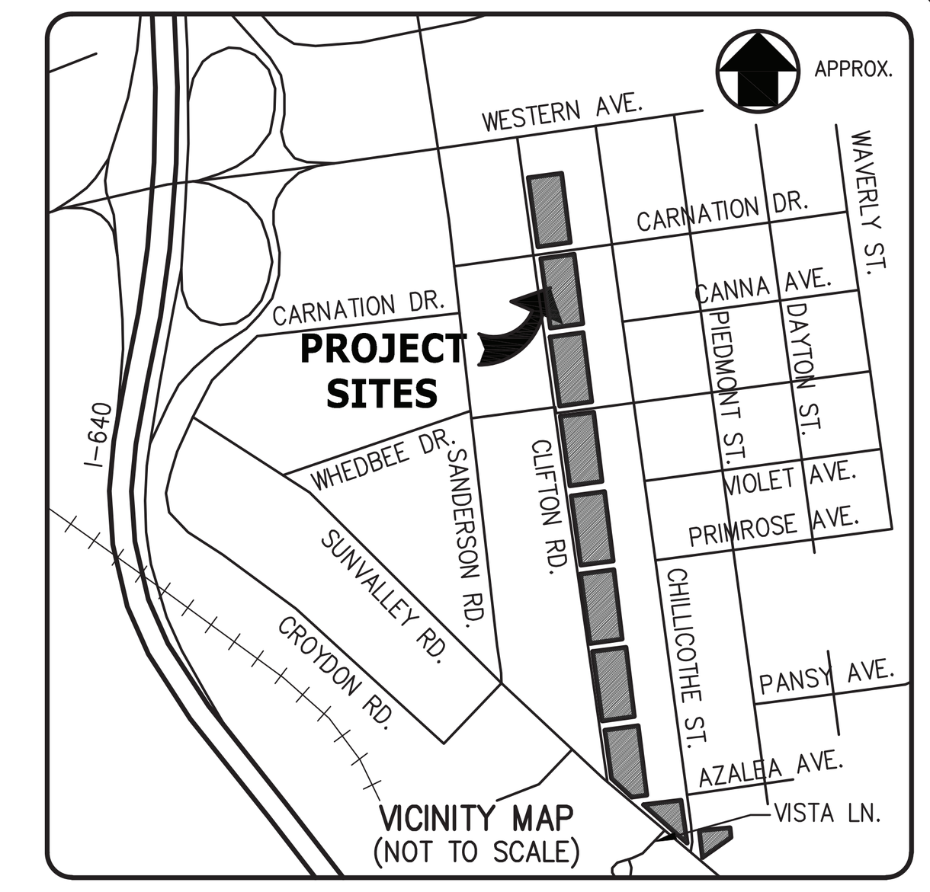
JASON R. HUNT
REGISTERED ENGINEER
AGRICULTURE
No. 112481
STATE OF TENNESSEE
12/12/18

CCI PROJECT NO.	00216-0005
DRAWING DATE	NOVEMBER 19, 2018
PM JRH	QC AWG
DRAWN LED	

C0.00







GENERAL NOTES:

1. THE BOUNDARY AND TOPOGRAPHIC DATA SHOWN WAS PROVIDED BY CANNON AND CANNON, INC. DATED AUGUST 17, 2018.
2. OWNERSHIP AND REFERENCE
   PARCELS 11.00 (BLK #23181), 12.00 (BLK #23182), & 01.00 (BLK #23161)
   THE CITY OF KNOXVILLE
   400 MAIN STREET
   KNOXVILLE, TENNESSEE 37902
   CITY WARD 23, CLT MAP 93, INSERT L, GROUP B
   PARCELS 41.00 (BLK #23162), 42.00 (BLK #23121), & 01.00 (BLK #23122)
   THE CITY OF KNOXVILLE
   400 MAIN STREET
   KNOXVILLE, TENNESSEE 37902
   CITY WARD 23, CLT MAP 93, INSERT E, GROUP H
   PARCELS 37.00 (BLK #23081), 1.01 (BLK #23082), & 1.02 (BLK #23082)
   THE CITY OF KNOXVILLE
   400 MAIN STREET
   KNOXVILLE, TENNESSEE 37902
   CITY WARD 23, CLT MAP 93, INSERT E, GROUP D
   PARCEL 23.00 (BLK #23083)
   THE CITY OF KNOXVILLE
   400 MAIN STREET
   KNOXVILLE, TENNESSEE 37902
   CITY WARD 23, CLT MAP 93, INSERT D, GROUP G
3. AREA OF PROPOSED SUBDIVISION = 7.7 AC±
4. APPROXIMATE TOTAL DISTURBED AREA = 7.7 AC.
5. PROPOSED UNITS = 53.
6. ALL SETBACKS SHALL BE IN ACCORDANCE WITH KNOXVILLE ZONING ORDINANCE:
   (R1-A) LOW DENSITY RESIDENTIAL DISTRICT
   FRONT SETBACK: 25'
   SIDE SETBACK: 10'
   REAR SETBACK: 25'
7. UNLESS NOTED OTHERWISE, DIMENSIONS ARE TAKEN FROM OUTSIDE FACE OF BUILDING AND/OR FACE OF CURB.
8. THE MINERAL AGGREGATE BASE AND ASPHALTIC SURFACE COURSES SHALL MEET THE MATERIALS, EQUIPMENT, CONSTRUCTION, AND TESTING REQUIREMENTS OF THESE DRAWINGS, AND THE CITY OF KNOXVILLE STANDARD SPECIFICATIONS.
9. TRAFFIC CONTROL DEVICES AND PAVEMENT MARKING SHALL CONFORM TO THE FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
10. PERIMETER SLOPES SHALL BE LANDSCAPED AND ARE NOT TO EXCEED 2:1 (H:V) UNLESS PROPER STABILIZATION IS PROPOSED BY A GEOTECHNICAL ENGINEER.
11. PROPOSED LANDSCAPE WILL COMPLY WITH ALL ASPECTS OF THE CITY OF KNOXVILLE TREE PROTECTION ORDINANCE AND ZONING ORDINANCES.
12. REFER TO SHEET C0.01 FOR HORIZONTAL CONTROL INFORMATION.

LEGEND

Symbol	Description
(hatched box)	PROPOSED ACCESS EASEMENT
(blue box)	PROPOSED ACCESSIBLE ROUTE
— — —	EXIST. R.O.W.
- - - -	BUILDING SETBACK LINE
-------	EXIST. EASEMENT LINE
ST	STORM SEWER LINE
SA	SANITARY SEWER LINE
OH	OVERHEAD UTILITIES
— —	WATER LINE
X OHT	OVERHEAD TELEPHONE
G X	FENCE LINE
——	UNDERGROUND GAS LINE

DEVELOPMENT UNIT COUNT

TOTAL PROPERTY LOTS	= 25
PROPOSED DUPLEX UNITS	= 25
PROPOSED 2-BDRM UNITS	= 3
TOTAL DEVELOPED UNITS	= 53

PARKING REQUIREMENTS

REQURED:	
DUPLEX = 2/UNIT (NO MAX.)	
= (50 X 2)	= 100
DETACHED HOUSE IS 2/UNIT (NO MAX.)	
REQUIRED (3 X 2)	= 6
TOTAL REQUIRED	= 106
PROVIDED:	
DUPLEX PARKING	= 100
DETACHED HOUSE	= 6
(PARKING PROVIDED IN DRIVEWAYS)	
TOTAL PROVIDED	= 106

REVISIONS	DATE
1 REVISED PER CITY OF KNOXVILLE COMMENTS	12/12/2018

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CLIENT: **KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION**
901 N. BROADWAY ST.
KNOXVILLE, TENNESSEE 37917
865-403-1168

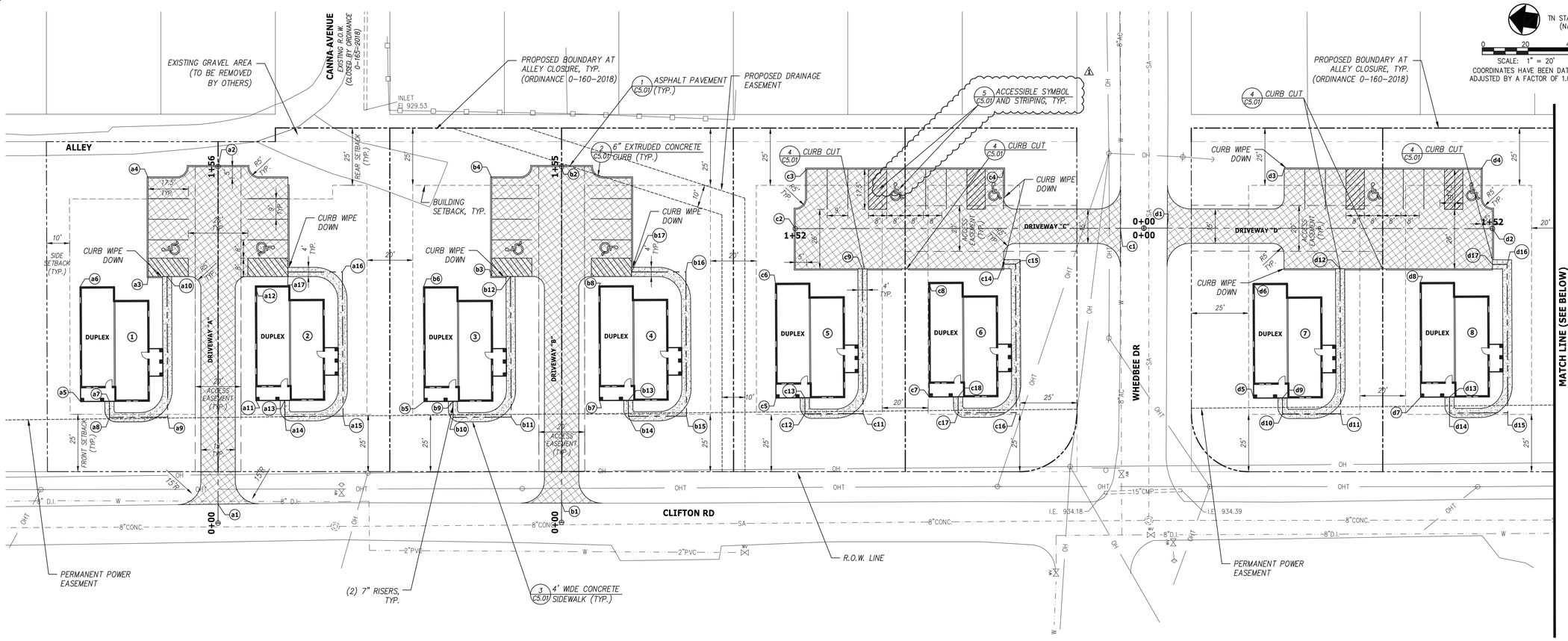
PROJECT: **CLIFTON ROAD DEVELOPMENT**
404 CLIFTON ROAD 1
KNOXVILLE, TENNESSEE

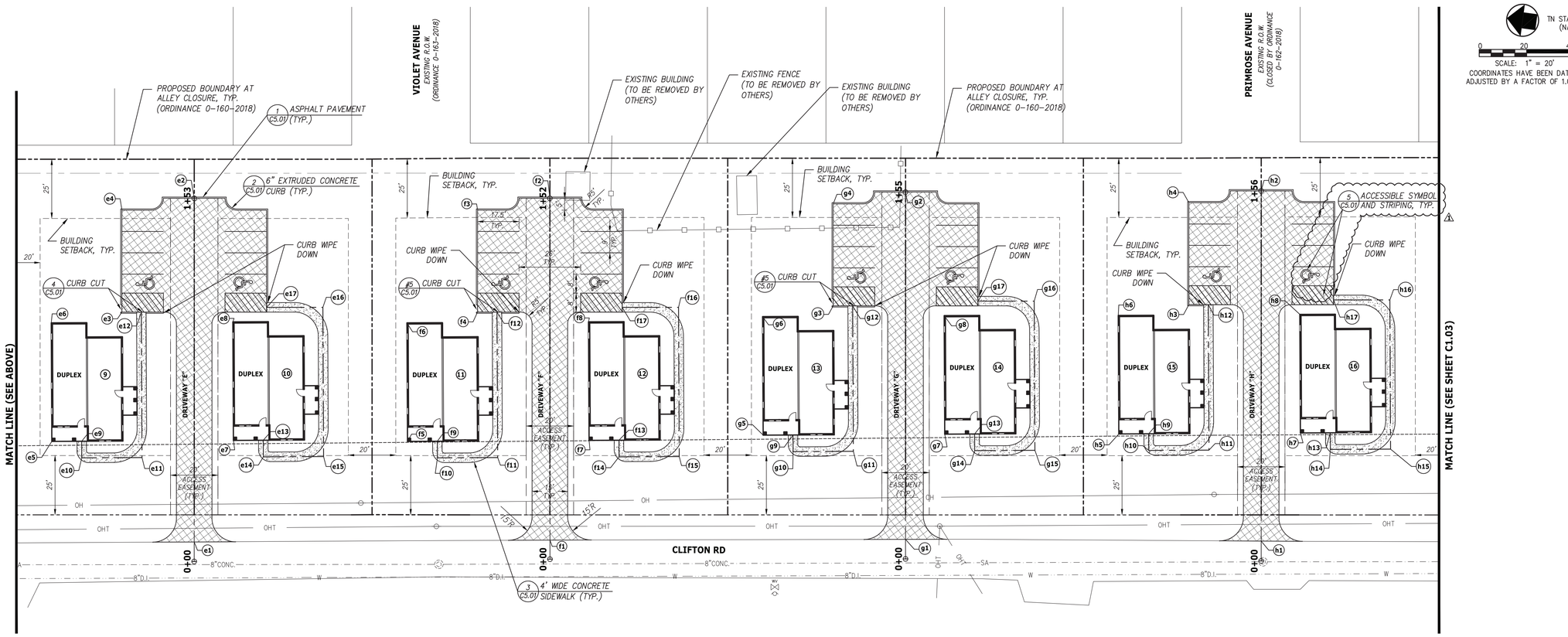
OVERALL SITE LAYOUT

JASON R. HUNT · REGISTERED ENGINEER · AGRICULTURE · COMMERCE · No. 112487 · STATE OF TENNESSEE
12/12/18

CCI PROJECT NO.	00216-0005
DRAWING DATE	NOVEMBER 19, 2018
PM JRH	QC AWG
DRAWN LED	

C1.01





NOTES:

1. SEE SHEET C1.01 FOR GENERAL NOTES.

LEGEND

- PROPOSED ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- 1 / C5.01 — DETAIL REFERENCE (DETAIL NO./SHEET NO.)
- 22 — NUMBER OF PARKING SPACES
- 1 — COORDINATE POINT
- HANDICAP PARKING
- EXIST. R.O.W.
- BUILDING SETBACK LINE
- EXIST. EASEMENT LINE
- ST — STORM SEWER LINE
- SA — SANITARY SEWER LINE
- OH — OVERHEAD UTILITIES
- W — WATER LINE
- OHT — OVERHEAD TELEPHONE
- X — FENCE LINE
- G — UNDERGROUND GAS LINE

REVISIONS	DATE
1 REVISED PER CITY OF KNOXVILLE COMMENTS	12/12/2018

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901 N. BROADWAY ST.
KNOXVILLE, TENNESSEE 37917
865-403-1168

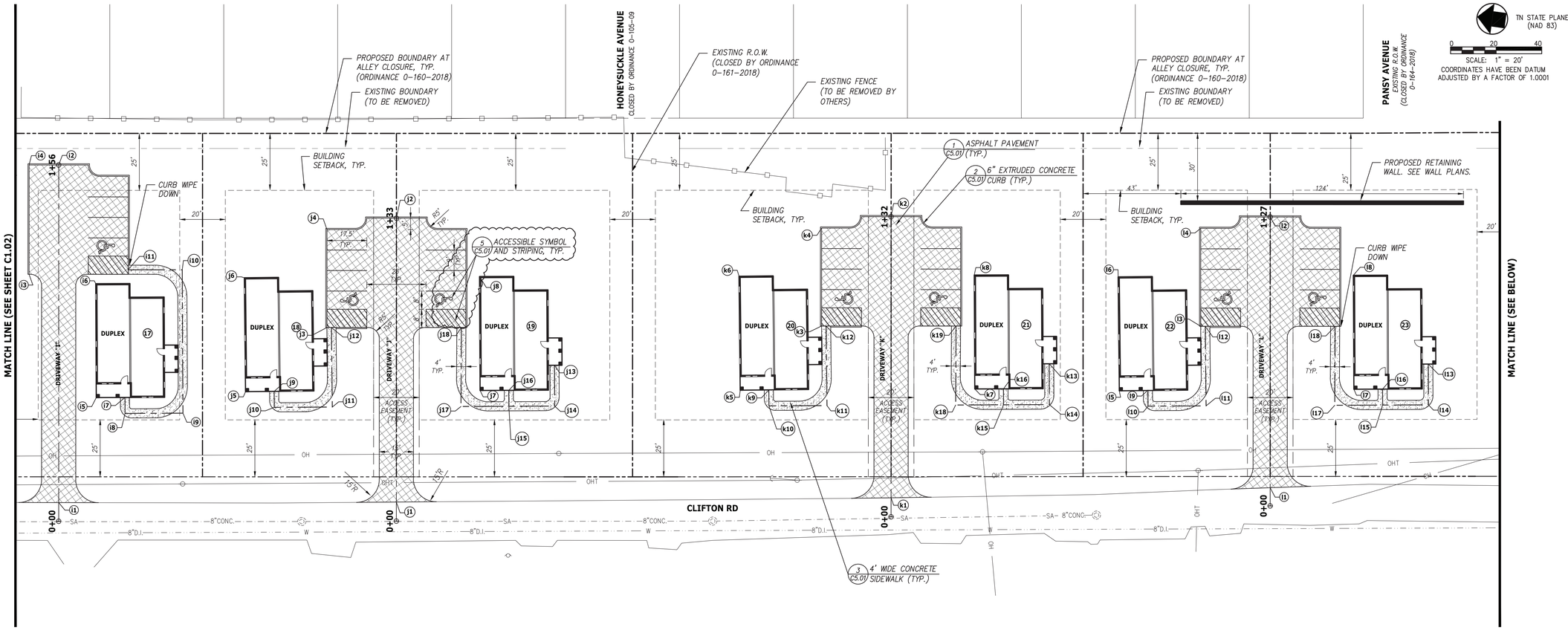
PROJECT: **CLIFTON ROAD DEVELOPMENT**
404 CLIFTON ROAD (1)
KNOXVILLE, TENNESSEE

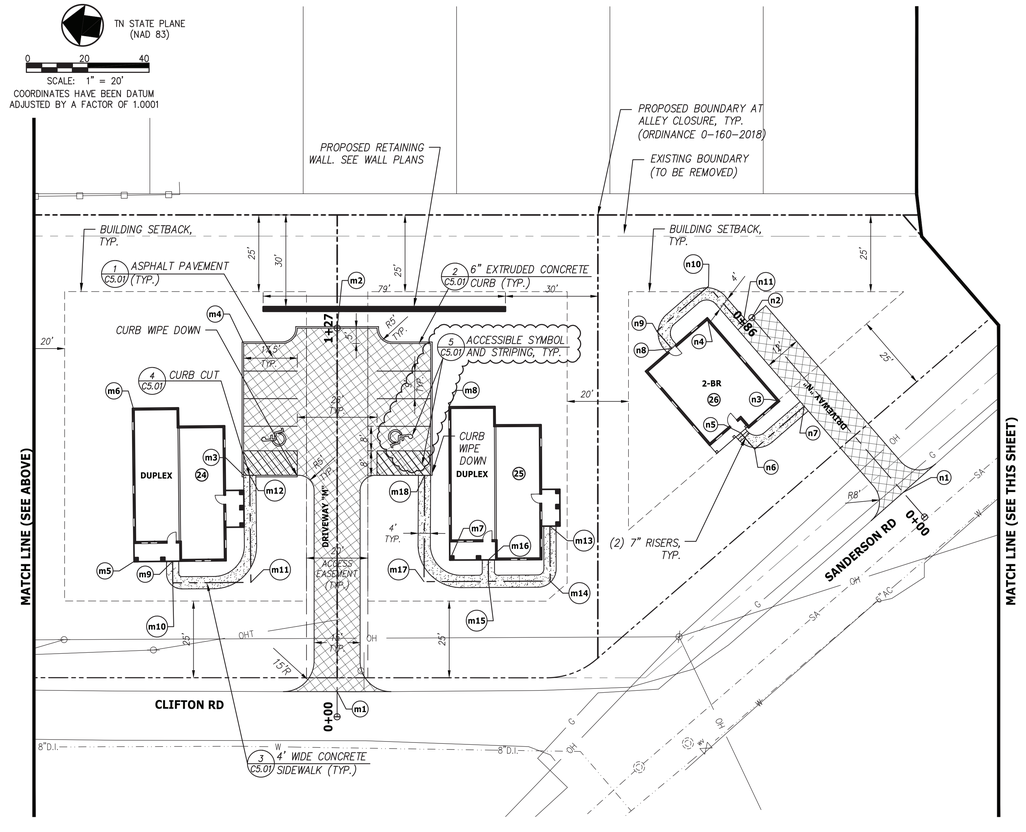
ENLARGED SITE LAYOUT

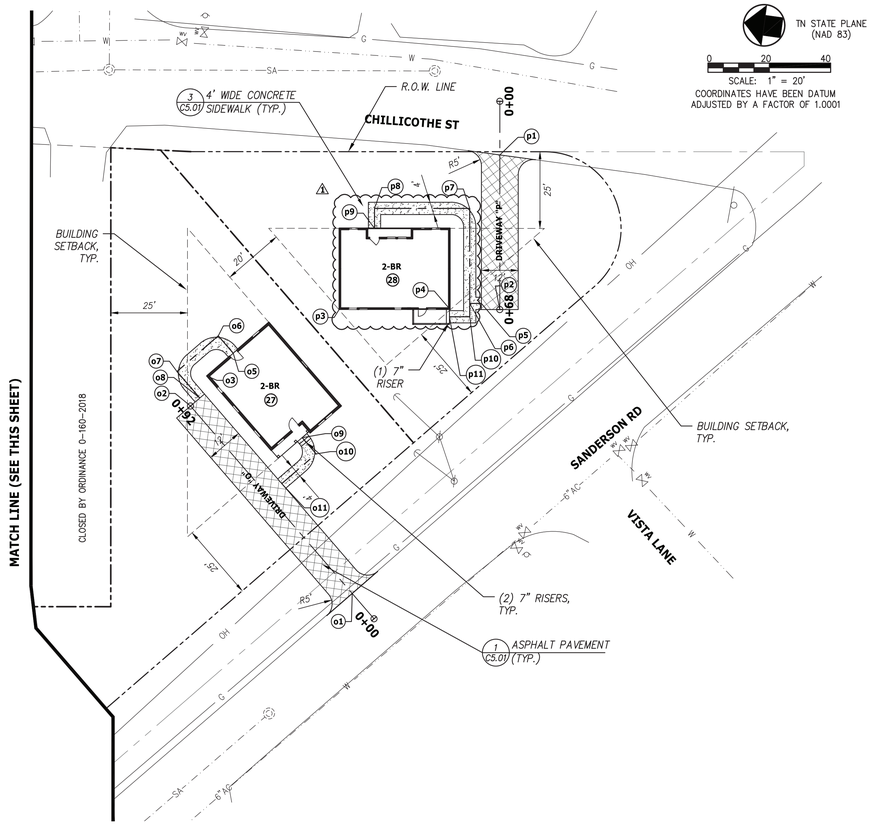
JASON R. HUNT — REGISTERED ENGINEER — AGRICULTURE — No. 112481 — STATE OF TENNESSEE
12/12/18

CCI PROJECT NO.	00216-0005
DRAWING DATE	NOVEMBER 19, 2018
PM JRH	QC AWG
DRAWN LED	

C1.02







NOTES:

1. *SEE SHEET C1.01 FOR GENERAL NOTES.*

LEGEND

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KNOXVILLE, TENNESSEE 37917

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404 CLIFTON ROAD ⚠
KNOXVILLE, TENNESSEE

ENLARGED SITE LAYOUT

JASON R. HUNT — REGISTERED ENGINEER — AGRICULTURE — ARCHITECTURE — COMMERCE — No. 112407 — STATE OF TENNESSEE
12/12/18

CCI PROJECT NO.	00216-0005
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PM JRH	QC AWG
DRAWN LED	

C1.03

DRIVEWAY A (LOTS 1 AND 2) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
a1	602803.29	2568068.42	DRIVEWAY CENTERLINE
a2	602823.15	2568214.42	DRIVEWAY CENTERLINE
a3	602846.89	2568162.76	PARKING CORNER
a4	602852.68	2568205.37	PARKING CORNER
a5	602868.81	2568104.73	BUILDING CORNER
a6	602875.79	2568154.24	BUILDING CORNERE
a7	602856.34	2568106.48	SIDEWALK CENTERLINE
a8	602855.36	2568099.55	SIDEWALK CENTERLINE
a9	602830.21	2568103.10	SIDEWALK CENTERLINE
a10	602838.77	2568163.86	SIDEWALK CENTERLINE
a11	602792.99	2568115.48	BUILDING CORNER
a12	602799.97	2568164.99	BUILDING CORNER
a13	602780.52	2568117.23	SIDEWALK CENTERLINE
a14	602779.55	2568110.30	SIDEWALK CENTERLINE
a15	602754.39	2568113.85	SIDEWALK CENTERLINE
a16	602763.17	2568176.15	SIDEWALK CENTERLINE
a17	602786.68	2568172.96	SIDEWALK CENTERLINE

DRIVEWAY B (LOTS 3 AND 4) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
b1	602654.71	2568089.12	DRIVEWAY CENTERLINE
b2	602674.50	2568234.67	DRIVEWAY CENTERLINE
b3	602698.25	2568183.01	PARKING CORNER
b4	602704.04	2568225.62	PARKING CORNER
b5	602720.16	2568124.98	BUILDING CORNER
b6	602727.14	2568174.49	BUILDING CORNER
b7	602644.35	2568135.73	BUILDING CORNER
b8	602651.32	2568185.24	BUILDING CORNER
b9	602707.70	2568126.73	SIDEWALK CENTERLINE
b10	602706.72	2568119.80	SIDEWALK CENTERLINE
b11	602681.56	2568123.35	SIDEWALK CENTERLINE
b12	602690.12	2568184.09	SIDEWALK CENTERLINE
b13	602631.88	2568137.48	SIDEWALK CENTERLINE
b14	602630.90	2568130.55	SIDEWALK CENTERLINE
b15	602605.74	2568134.10	SIDEWALK CENTERLINE
b16	602614.52	2568196.40	SIDEWALK CENTERLINE
b17	602638.04	2568193.21	DRIVEWAY CENTERLINE

DRIVEWAY C (LOTS 5 AND 6) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
c1	602429.04	2568240.87	DRIVEWAY CENTERLINE
c2	602569.74	2568221.58	DRIVEWAY CENTERLINE
c3	602568.31	2568247.92	PARKING CORNER
c4	602483.10	2568259.58	PARKING CORNER
c5	602568.10	2568147.23	BUILDING CORNER
c6	602575.08	2568196.74	BUILDING CORNER
c7	602501.85	2568156.65	BUILDING CORNER
c8	602508.83	2568206.16	BUILDING CORNER
c9	602538.31	2568208.12	SIDEWALK CENTERLINE
c11	602529.49	2568145.60	SIDEWALK CENTERLINE
c12	602554.65	2568142.06	SIDEWALK CENTERLINE
c13	602555.63	2568148.99	SIDEWALK CENTERLINE
c14	602477.46	2568218.47	SIDEWALK CENTERLINE
c15	602472.28	2568219.18	SIDEWALK CENTERLINE
c16	602463.25	2568155.03	SIDEWALK CENTERLINE
c17	602488.40	2568151.48	SIDEWALK CENTERLINE
c18	602489.38	2568158.41	SIDEWALK CENTERLINE

DRIVEWAY D (LOTS 7 AND 8) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
d1	602408.77	2568243.70	DRIVEWAY CENTERLINE
d2	602268.02	2568262.62	DRIVEWAY CENTERLINE
d3	602361.65	2568276.16	PARKING CORNER
d4	602276.42	2568287.63	PARKING CORNER
d5	602361.43	2568175.28	BUILDING CORNER
d6	602368.40	2568224.79	BUILDING CORNER
d7	602289.19	2568185.52	BUILDING CORNER
d8	602296.17	2568235.03	BUILDING CORNER
d9	602348.95	2568177.04	SIDEWALK CENTERLINE
d10	602347.97	2568170.11	SIDEWALK CENTERLINE
d11	602322.82	2568173.65	SIDEWALK CENTERLINE
d12	602331.63	2568236.30	SIDEWALK CENTERLINE
d13	602276.71	2568187.28	SIDEWALK CENTERLINE
d14	602275.74	2568180.35	SIDEWALK CENTERLINE
d15	602250.59	2568183.88	SIDEWALK CENTERLINE
d16	602259.60	2568248.02	SIDEWALK CENTERLINE
d17	602265.95	2568247.17	SIDEWALK CENTERLINE

DRIVEWAY E (LOTS 9 AND 10) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
e1	602151.06	2568159.91	DRIVEWAY CENTERLINE
e2	602170.60	2568303.55	DRIVEWAY CENTERLINE
e3	602194.36	2568251.88	PARKING CORNER
e4	602200.15	2568294.49	PARKING CORNER
e5	602216.28	2568193.85	BUILDING CORNER
e6	602223.25	2568243.36	BUILDING CORNER
e7	602140.46	2568204.60	BUILDING CORNER
e8	602147.44	2568254.11	BUILDING CORNER
e9	602203.81	2568195.60	SIDEWALK CENTERLINE
e10	602202.83	2568188.67	SIDEWALK CENTERLINE
e11	602177.67	2568192.22	SIDEWALK CENTERLINE
e12	602186.24	2568252.98	SIDEWALK CENTERLINE
e13	602127.99	2568206.35	SIDEWALK CENTERLINE
e14	602127.01	2568199.42	SIDEWALK CENTERLINE
e15	602101.85	2568202.97	SIDEWALK CENTERLINE
e16	602110.63	2568265.27	SIDEWALK CENTERLINE
e17	602134.15	2568262.08	SIDEWALK CENTERLINE

DRIVEWAY F (LOTS 11 AND 12) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
f1	602002.49	2568180.91	DRIVEWAY CENTERLINE
f2	602021.98	2568323.78	DRIVEWAY CENTERLINE
f3	602051.52	2568314.72	PARKING CORNER
f4	602045.73	2568272.11	PARKING CORNER
f5	602067.65	2568214.08	BUILDING CORNER
f6	602074.63	2568263.59	BUILDING CORNER
f7	601991.83	2568224.83	BUILDING CORNER
f8	601998.81	2568274.34	BUILDING CORNER
f9	602055.18	2568215.83	SIDEWALK CENTERLINE
f10	602054.20	2568208.90	SIDEWALK CENTERLINE
f11	602029.04	2568212.45	SIDEWALK CENTERLINE
f12	602037.61	2568273.21	SIDEWALK CENTERLINE
f13	601979.36	2568226.58	SIDEWALK CENTERLINE
f14	601978.38	2568219.65	SIDEWALK CENTERLINE
f15	601953.22	2568223.20	SIDEWALK CENTERLINE
f16	601962.00	2568285.50	SIDEWALK CENTERLINE
f17	601985.52	2568282.31	SIDEWALK CENTERLINE

DRIVEWAY G (LOTS 13 AND 14) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
g1	601853.95	2568201.45	DRIVEWAY CENTERLINE
g2	601873.71	2568346.61	DRIVEWAY CENTERLINE
g3	601897.46	2568294.94	PARKING CORNER
g4	601903.24	2568337.55	PARKING CORNER
g5	601919.37	2568236.91	BUILDING CORNER
g6	601926.35	2568286.42	BUILDING CORNER
g7	601843.55	2568247.66	BUILDING CORNER
g8	601850.53	2568297.17	BUILDING CORNER
g9	601906.90	2568238.67	SIDEWALK CENTERLINE
g10	601905.93	2568231.74	SIDEWALK CENTERLINE
g11	601880.77	2568235.28	SIDEWALK CENTERLINE
g12	601889.33	2568296.02	SIDEWALK CENTERLINE
g13	601831.08	2568249.42	SIDEWALK CENTERLINE
g14	601830.11	2568242.49	SIDEWALK CENTERLINE
g15	601804.95	2568246.03	SIDEWALK CENTERLINE
g16	601813.73	2568308.34	SIDEWALK CENTERLINE
g17	601837.25	2568305.14	SIDEWALK CENTERLINE

DRIVEWAY H (LOTS 15 AND 16) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
h1	601705.23	2568220.96	DRIVEWAY CENTERLINE
h2	601725.14	2568367.34	DRIVEWAY CENTERLINE
h3	601748.90	2568315.67	PARKING CORNER
h4	601754.69	2568358.27	PARKING CORNER
h5	601770.82	2568257.64	BUILDING CORNER
h6	601777.80	2568307.15	BUILDING CORNER
h7	601695.00	2568268.38	BUILDING CORNER
h8	601701.98	2568317.90	BUILDING CORNER
h9	601758.35	2568259.39	SIDEWALK CENTERLINE
h10	601757.37	2568252.46	SIDEWALK CENTERLINE
h11	601732.21	2568256.01	SIDEWALK CENTERLINE
h12	601740.78	2568316.77	SIDEWALK CENTERLINE
h13	601682.53	2568270.14	SIDEWALK CENTERLINE
h14	601681.55	2568263.21	SIDEWALK CENTERLINE
h15	601656.39	2568266.76	SIDEWALK CENTERLINE
h16	601665.17	2568329.06	SIDEWALK CENTERLINE
h17	601688.69	2568325.87	SIDEWALK CENTERLINE

DRIVEWAY I (LOT 17) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
i1	601612.05	2568233.36	DRIVEWAY CENTERLINE
i2	601632.01	2568380.19	DRIVEWAY CENTERLINE
i3	601638.45	2568330.88	PARKING CORNER
i4	601644.90	2568378.44	PARKING CORNER
i5	601601.92	2568281.23	BUILDING CORNER
i6	601608.89	2568330.74	BUILDING CORNER
i7	601589.45	2568282.99	SIDEWALK CENTERLINE
i8	601588.48	2568276.05	SIDEWALK CENTERLINE
i9	601563.32	2568279.60	SIDEWALK CENTERLINE
i10	601572.10	2568341.90	SIDEWALK CENTERLINE
i11	601595.61	2568338.71	SIDEWALK CENTERLINE

DRIVEWAY J (LOTS 18 AND 19) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
j1	601465.25	2568253.56	DRIVEWAY CENTERLINE
j2	601482.03	2568377.03	DRIVEWAY CENTERLINE
j3	601505.80	2568325.36	PARKING CORNER
j4	601511.58	2568367.97	PARKING CORNER
j5	601537.38	2568292.64	BUILDING CORNER
j6	601544.64	2568342.11	BUILDING CORNER
j7	601435.47	2568307.05	BUILDING CORNER
j8	601442.44	2568356.56	BUILDING CORNER
j9	601524.94	2568294.46	SIDEWALK CENTERLINE
j10	601523.97	2568287.52	SIDEWALK CENTERLINE
j11	601498.74	2568291.08	SIDEWALK CENTERLINE
j12	601503.81	2568325.63	SIDEWALK CENTERLINE
j13	601404.61	2568322.42	SIDEWALK CENTERLINE
j14	601402.11	2568304.68	SIDEWALK CENTERLINE
j15	601422.02	2568301.87	SIDEWALK CENTERLINE
j16	601423.00	2568308.80	SIDEWALK CENTERLINE
j17	601442.83	2568298.94	SIDEWALK CENTERLINE
j18	601447.33	2568333.30	SIDEWALK CENTERLINE

DRIVEWAY K (LOTS 20 AND 21) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
k1	601250.41	2568284.70	DRIVEWAY CENTERLINE
k2	601267.04	2568406.94	DRIVEWAY CENTERLINE
k3	601290.79	2568355.28	PARKING CORNER
k4	601296.58	2568397.89	PARKING CORNER
k5	601322.37	2568322.56	BUILDING CORNER
k6	601329.64	2568372.03	BUILDING CORNER
k7	601220.46	2568336.96	BUILDING CORNER
k8	601227.43	2568386.48	BUILDING CORNER
k9	601309.94	2568324.37	SIDEWALK CENTERLINE
k10	601308.96	2568317.44	SIDEWALK CENTERLINE
k11	601283.73	2568320.99	SIDEWALK CENTERLINE
k12	601288.81	2568355.55	SIDEWALK CENTERLINE
k13	601189.60	2568352.33	SIDEWALK CENTERLINE
k14	601187.10	2568334.59	SIDEWALK CENTERLINE
k15	601207.01	2568331.79	SIDEWALK CENTERLINE
k16	601207.99	2568338.72	SIDEWALK CENTERLINE
k18	601227.82	2568328.86	SIDEWALK CENTERLINE
k19	601232.33	2568363.21	SIDEWALK CENTERLINE

DRIVEWAY L (LOTS 22 AND 23) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
l1	601086.18	2568311.51	DRIVEWAY CENTERLINE
l2	601102.18	2568429.26	DRIVEWAY CENTERLINE
l3	601125.95	2568377.59	PARKING CORNER
l4	601131.73	2568420.20	PARKING CORNER
l5	601157.50	2568344.72	BUILDING CORNER
l6	601164.77	2568394.19	BUILDING CORNER
l7	601055.61	2568359.28	BUILDING CORNER
l8	601062.59	2568408.79	BUILDING CORNER
l9	601145.09	2568346.69	SIDEWALK CENTERLINE
l10	601144.12	2568339.75	SIDEWALK CENTERLINE
l11	601118.89	2568343.31	SIDEWALK CENTERLINE
l12	601123.96	2568377.86	SIDEWALK CENTERLINE
l13	601024.76	2568374.65	SIDEWALK CENTERLINE
l14	601022.26	2568356.90	SIDEWALK CENTERLINE
l15	601042.17	2568354.10	SIDEWALK CENTERLINE
l16	601043.14	2568361.03	SIDEWALK CENTERLINE
l17	601062.97	2568351.17	SIDEWALK CENTERLINE
l18	601067.48	2568385.53	SIDEWALK CENTERLINE

DRIVEWAY M (LOTS 24 AND 25) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
m1	600888.42	2568338.86	DRIVEWAY CENTERLINE
m2	600904.38	2568456.30	DRIVEWAY CENTERLINE
m3	600928.14	2568404.64	PARKING CORNER
m4	600933.93	2568447.25	PARKING CORNER
m5	600959.76	2568371.98	BUILDING CORNER
m6	600966.73	2568421.49	BUILDING CORNER
m7	600857.81	2568386.33	BUILDING CORNER
m8	600864.78	2568435.84	BUILDING CORNER
m9	600947.29	2568373.73	SIDEWALK CENTERLINE
m10	600946.31	2568366.80	SIDEWALK CENTERLINE
m11	600921.08	2568370.36	SIDEWALK CENTERLINE
m12	600926.16	2568404.91	SIDEWALK CENTERLINE
m13	600826.95	2568401.69	SIDEWALK CENTERLINE
m14	600824.46	2568383.95	SIDEWALK CENTERLINE
m15	600844.37	2568381.15	SIDEWALK CENTERLINE
m16	600845.34	2568388.08	SIDEWALK CENTERLINE
m17	600865.17	2568378.22	SIDEWALK CENTERLINE
m18	600869.68	2568412.57	SIDEWALK CENTERLINE

DRIVEWAY N (LOT 26) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
n1	600714.28	2568428.12	DRIVEWAY CENTERLINE
n2	600770.84	2568477.91	DRIVEWAY CENTERLINE
n3	600758.23	2568452.15	BUILDING CORNER
n4	600785.25	2568475.94	BUILDING CORNER
n5	600769.41	2568440.20	SIDEWALK CENTERLINE
n6	600764.16	2568435.57	SIDEWALK CENTERLINE
n7	600750.04	2568451.61	SIDEWALK CENTERLINE
n8	600795.38	2568464.43	SIDEWALK CENTERLINE
n9	600801.01	2568469.38	SIDEWALK CENTERLINE
n10	600786.25	2568486.15	SIDEWALK CENTERLINE
n11	600773.48	2568474.91	SIDEWALK CENTERLINE

DRIVEWAY 0 (LOT 27) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
o1	600618.90	2568536.71	DRIVEWAY CENTERLINE
o2	600679.39	2568590.18	DRIVEWAY CENTERLINE
o3	600675.40	2568600.61	BUILDING CORNER
o5	600667.91	2568609.12	SIDEWALK CENTERLINE
o6	600673.52	2568614.07	SIDEWALK CENTERLINE
o7	600685.30	2568600.74	SIDEWALK CENTERLINE
o8	600676.75	2568593.18	SIDEWALK CENTERLINE
o9	600641.93	2568584.88	SIDEWALK CENTERLINE
o10	600636.69	2568580.24	SIDEWALK CENTERLINE
o11	600646.51	2568569.12	SIDEWALK CENTERLINE

DRIVEWAY P (LOT 28) COORDINATE TABLE

POINT #	NORTHING	EASTING	DESCRIPTION
p1	600590.50	2568684.90	DRIVEWAY CENTERLINE
p2	600583.71	2568634.95	DRIVEWAY CENTERLINE
p3	600635.57	2568628.05	BUILDING CORNER
p4	600599.89	2568632.89	BUILDING CORNER
p5	600589.93	2568636.12	SIDEWALK CENTERLINE
p6	600593.70	2568635.61	SIDEWALK CENTERLINE
p7	600597.87	2568666.30	SIDEWALK CENTERLINE
p8	600628.64	2568662.12	SIDEWALK CENTERLINE
p9	600627.77	2568655.68	SIDEWALK CENTERLINE
p10	600593.12	2568631.29	SIDEWALK CENTERLINE
p11	600599.66	2568630.40	SIDEWALK CENTERLINE

REVISIONS	DATE
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901 N. BROADWAY ST.
KNOXVILLE, TENNESSEE 37917

PROJECT:
CLIFTON ROAD DEVELOPMENT
404 CLIFTON ROAD 1
KNOXVILLE, TENNESSEE

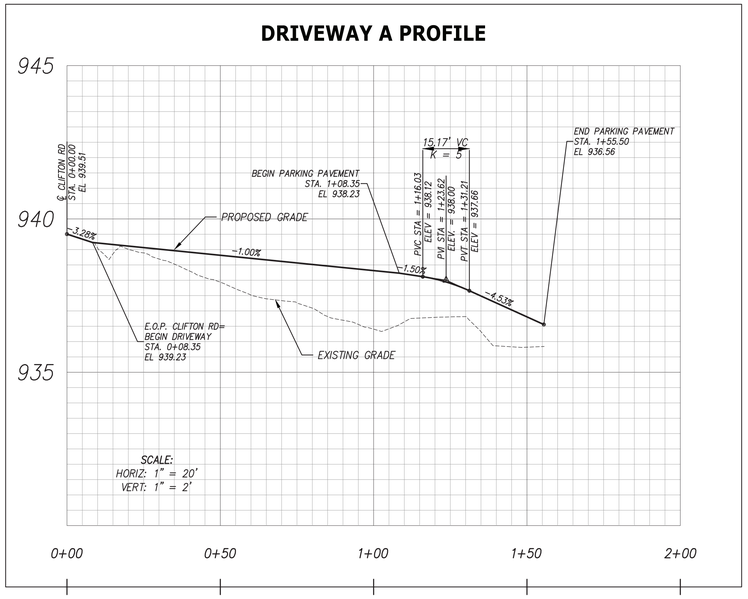
HORIZONTAL COORDINATE POINTS

JASON R. HUNT REGISTERED ENGINEER No. 112487 STATE OF TENNESSEE
12/12/18

CCI PROJECT NO. 00216-0005
DRAWING DATE NOVEMBER 19, 2018
PM JRH QC AWG
DRAWN LED

C1.04

DRIVEWAY A PROFILE



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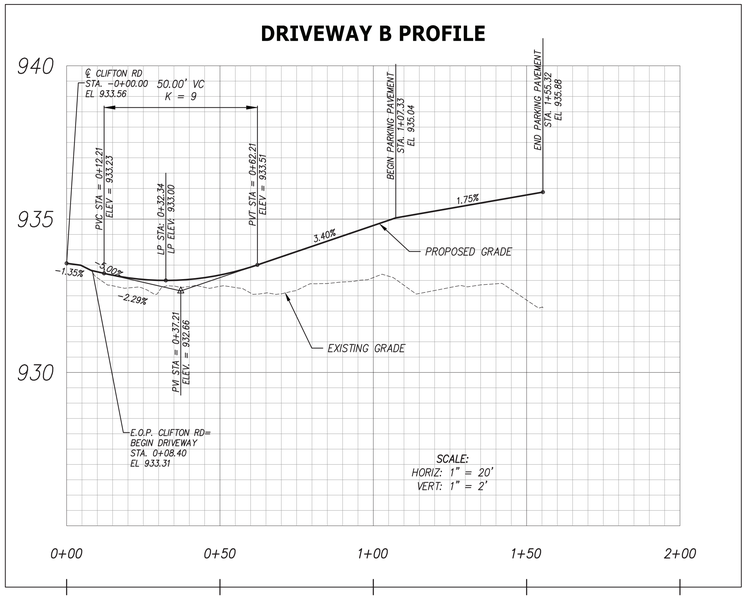

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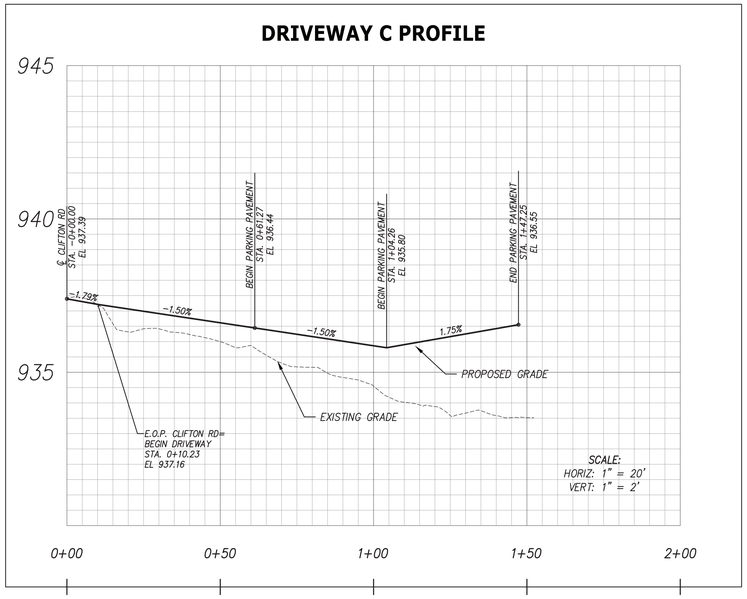

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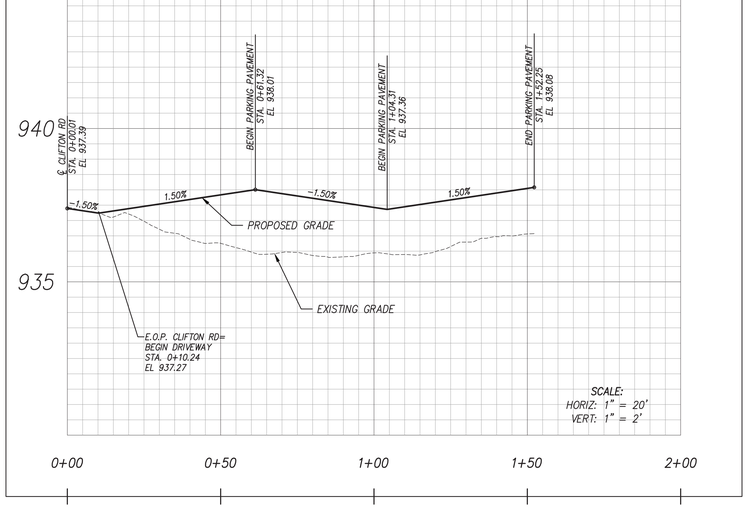

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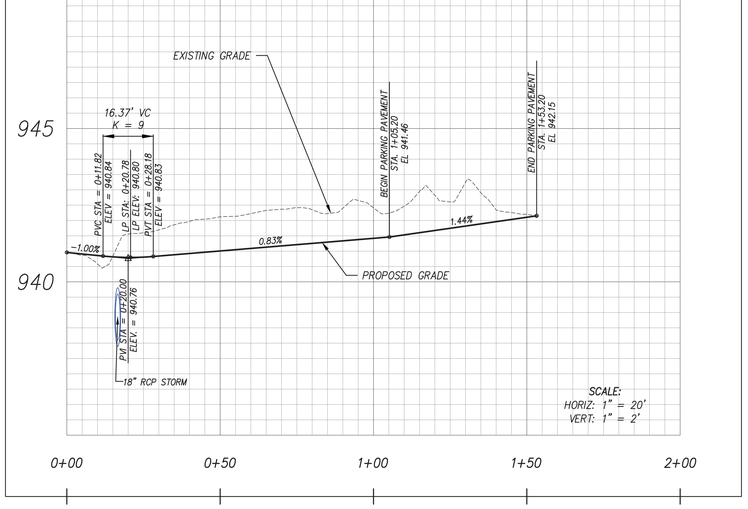

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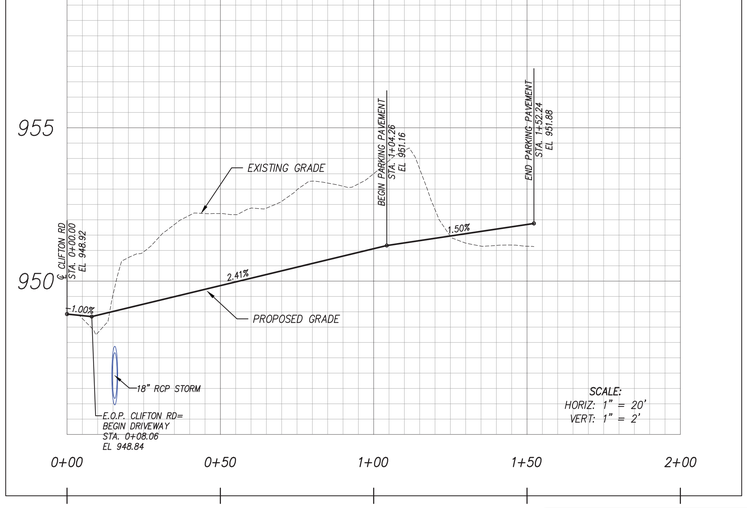

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KNOXVILLE, TENNESSEE 37917

PROJECT:
CLIFTON ROAD DEVELOPMENT
(404 CLIFTON ROAD) ⚠1
KNOXVILLE, TENNESSEE

DRIVEWAY PROFILES

JASON R. HUNT
REGISTERED ENGINEER
AGRICULTURE
No. 112487
STATE OF TENNESSEE
12/12/18

CCI PROJECT NO.	00216-0005
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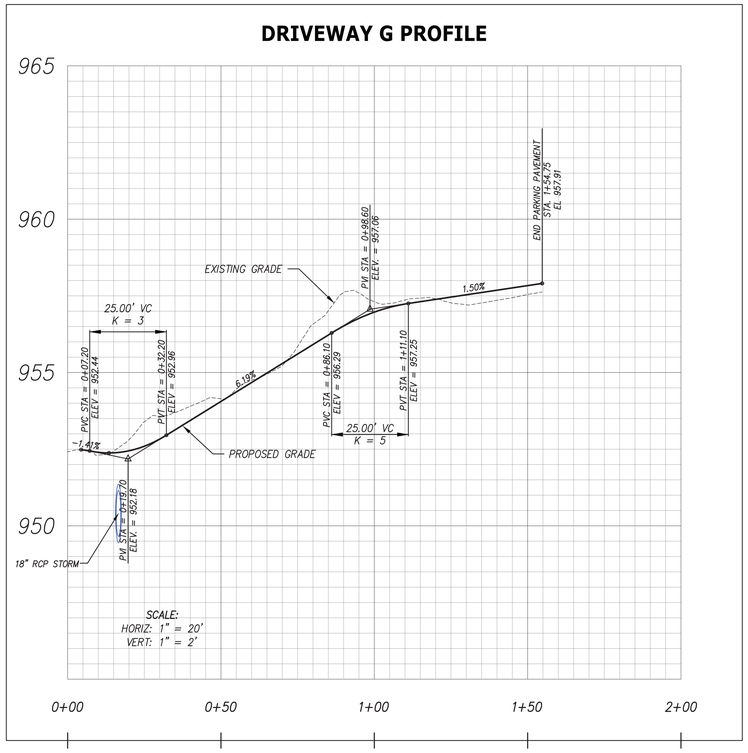
C2.01

DRIVEWAY G PROFILE



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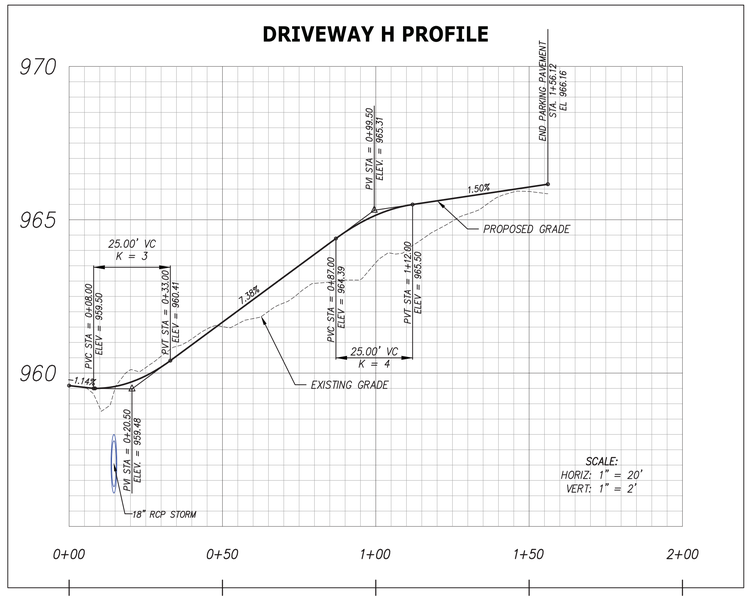

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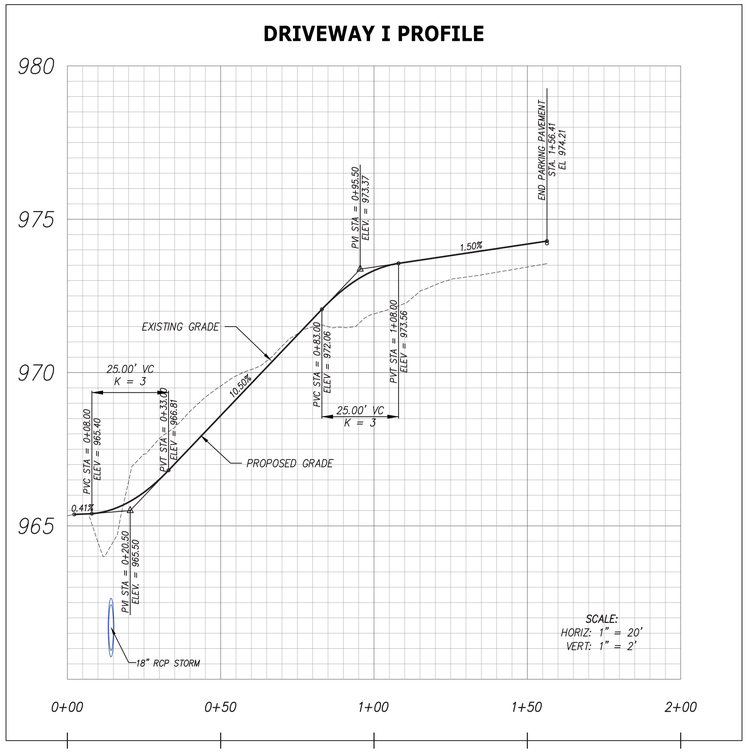

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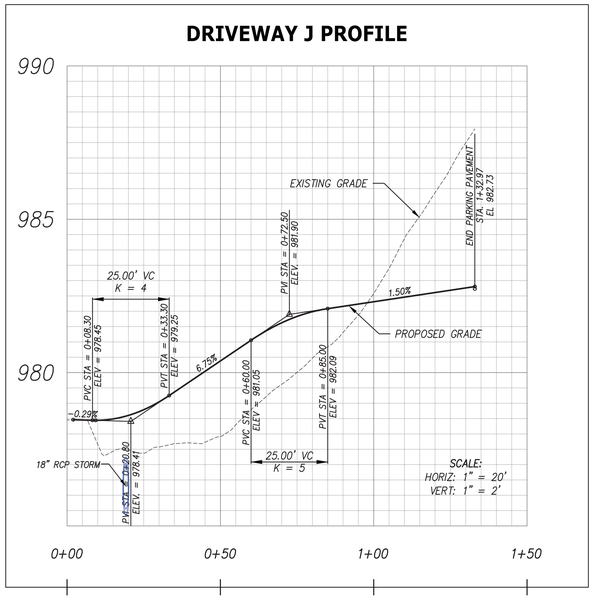

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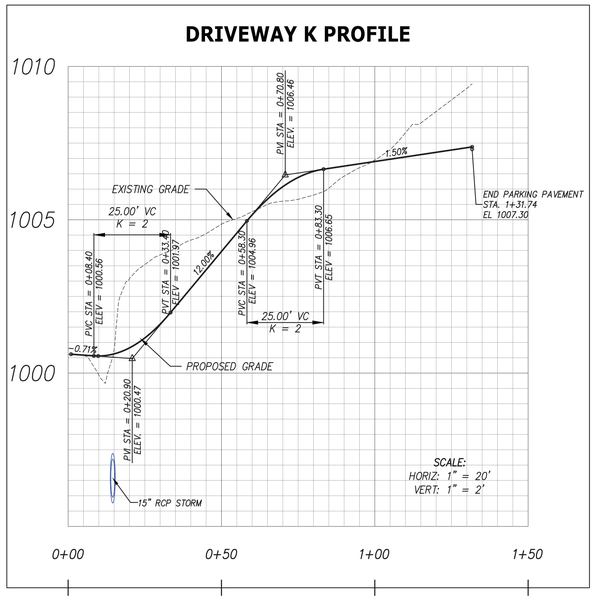

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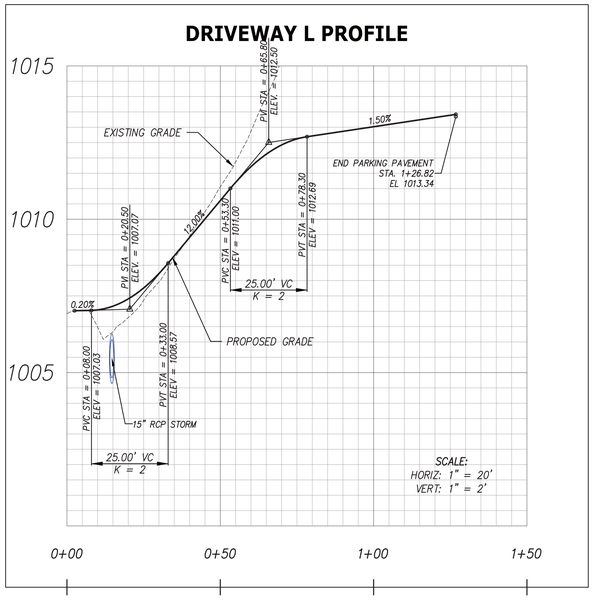

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KNOXVILLE, TENNESSEE

DRIVEWAY PROFILES

JASON R. HUNT — REGISTERED ENGINEER — AGRICULTURE — No. 112487 — STATE OF TENNESSEE
12/12/18

CCI PROJECT NO.	00216-0005		
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PM	JRH	QC	AWG
DRAWN	LED		

C2.02

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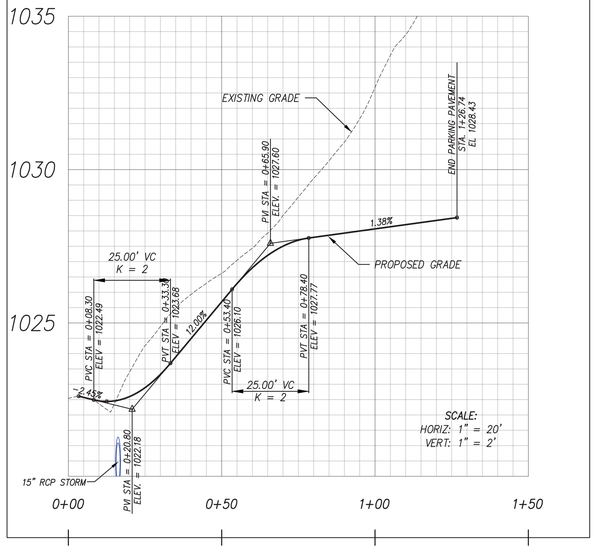

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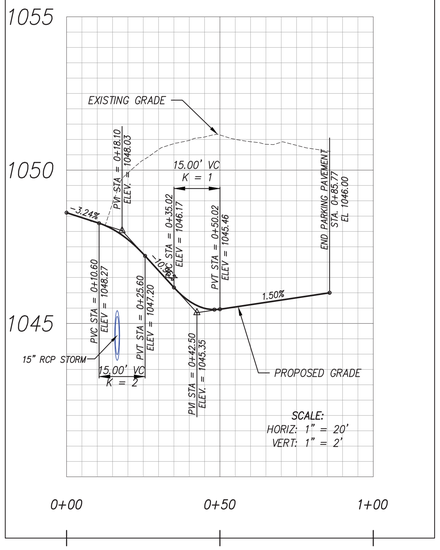

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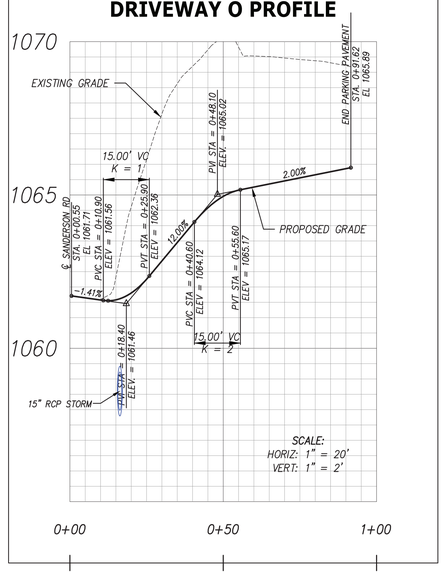

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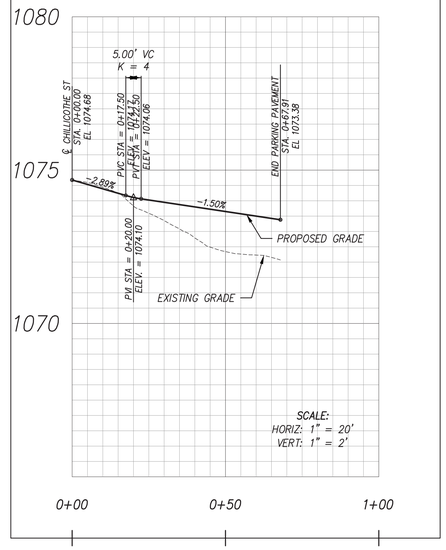

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DRIVEWAY PROFILES

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AGRICULTURE
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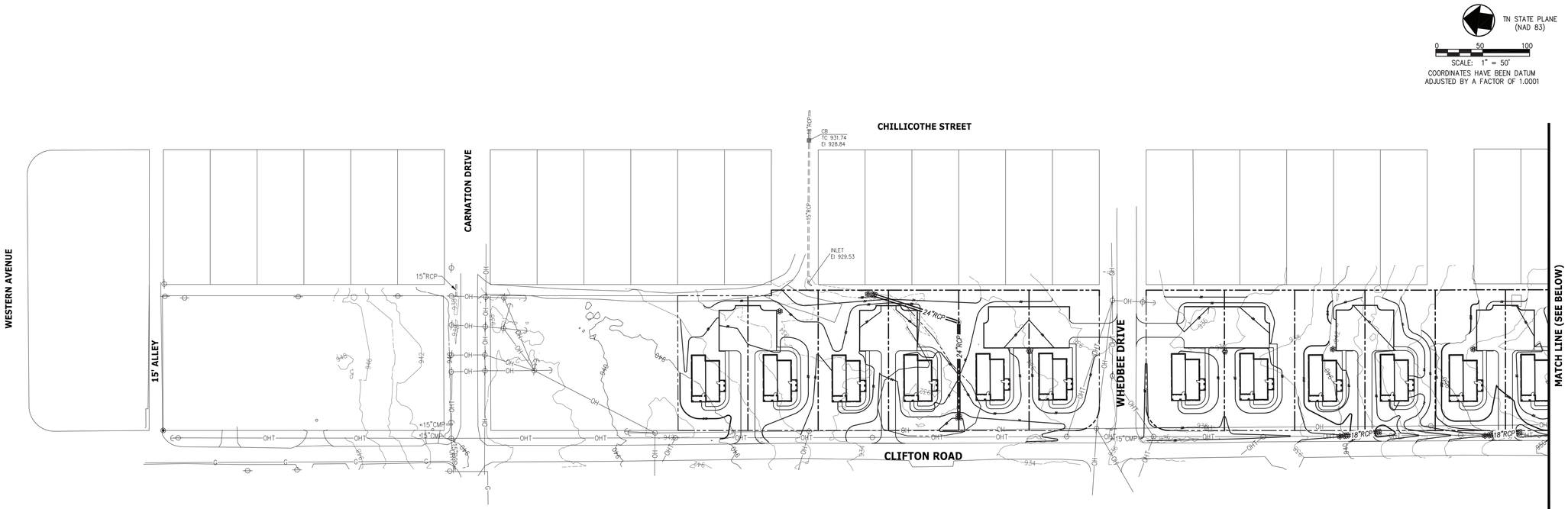

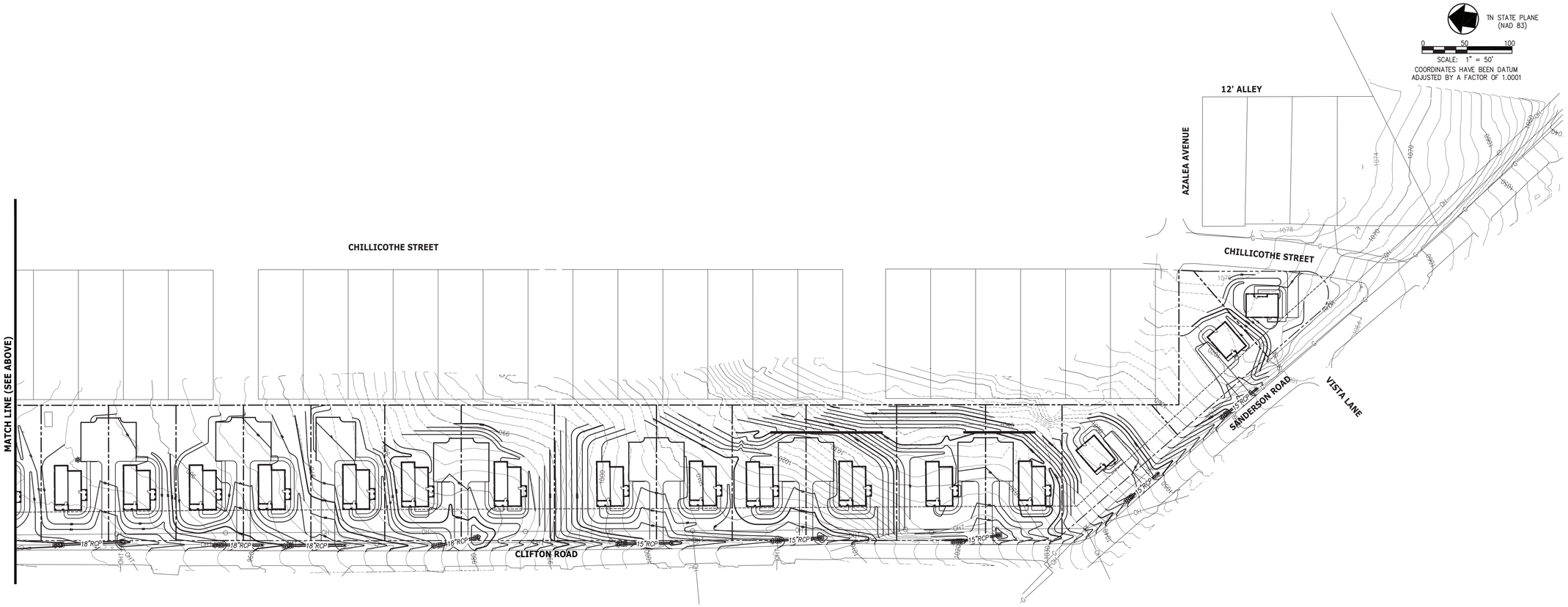

NOTES:

1. THE BOUNDARY AND TOPOGRAPHIC DATA SHOWN WAS PROVIDED BY CANNON AND CANNON, INC. DATED AUGUST 17, 2018.
2. THE DISTURBED AREA IS APPROXIMATELY 7.7± ACRES. THE TOTAL SITE AREA IS APPROXIMATELY 7.7± ACRES.
3. UNLESS NOTED OTHERWISE, THE PROPOSED GRADES SHOWN ON THESE DRAWINGS ARE FINISH GRADE. EXISTING AND PROPOSED CONTOURS ARE SHOWN AT 2 FT. INTERVALS.
4. EROSION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK. THE DEVICES SHOWN ON THE DRAWINGS ARE THE MINIMUM REQUIRED. THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL DEVICES AS NEEDED.
5. THE SITE SHALL BE CLEARED AND GRUBBED WITHIN THE LIMITS OF EXCAVATION. COMPLETELY DISPOSE OF ALL MATERIALS RESULTING FROM CLEARING AND GRUBBING OFF-SITE OR ON-SITE AT A LOCATION DETERMINED BY THE OWNER.
6. ALL TREE STUMPS, BOULDERS, AND OTHER OBSTRUCTIONS SHALL BE REMOVED TO A DEPTH OF 2 FT BELOW THE SUBGRADE. ROCK SHALL BE SCARIFIED TO A DEPTH OF 1 FT BELOW SUBGRADE.
7. STRIP TOPSOIL TO A MINIMUM DEPTH OF 8-IN. AND TEMPORARILY STOCKPILE EXCAVATED MATERIALS. INSTALL SILT FENCE OR OTHER APPROPRIATE EROSION CONTROL STRUCTURES ON THE DOWN HILL SIDE OF THE STOCKPILE.
8. PROOF ROLL AREAS TO RECEIVE FILL AND PLACE FILL IN ACCORDANCE WITH GEOTECHNICAL ENGINEER.
9. A 4 IN. (MIN) LAYER OF TOPSOIL SHALL BE PLACED OVER THE AREAS TO BE SEEDED AND TO THE FINISH GRADE ELEVATIONS AS SHOWN ON THE DRAWINGS.
10. **TEMPORARY SEEDING MIXTURES SHALL BE AS FOLLOWS:**

SEEDING DATES	GRASS SEED	PERCENTAGES
1/1 TO 5/1	ITALIAN RYE	33%
	KOREAN LESPEDEZA	33%
	SUMMER OATS	34%
5/1 TO 7/15	SUDAN - SORGHUM	100%
5/1 TO 7/15	STAR MILLET	100%
7/15 TO 1/1	BALBOA RYE	67%
	ITALIAN RYE	33%

12. **PERMANENT SEEDING MIXTURES SHALL BE AS FOLLOWS:**

SEEDING DATES	GRASS SEED	PERCENTAGES
2/1 TO 7/1	KENTUCKY 31 FESCUE	80%
	KOREAN LESPEDEZA	15%
	ENGLISH RYE	5%
6/1 TO 8/15	KENTUCKY 31 FESCUE	55%
	ENGLISH RYE	20%
	KOREAN LESPEDEZA	15%
	GERMAN MILLET	10%
4/15 TO 8/15	BERMUDAGRASS (HULLED)	70%
	ANNUAL LESPEDEZA	30%
8/1 TO 12/1	KENTUCKY 31 FESCUE	70%
	ENGLISH RYE	20%
	WHITE CLOVER	10%
2/1 TO 12/1	KENTUCKY 31 FESCUE	70%
	CROWN VETCH	25%
	ENGLISH RYE	5%

1. MULCH WITH STRAW AT A RATE OF 100 LBS./1000 S.F. OVER THE SEEDED AREAS.
2. DO NOT ALLOW WATER TO ACCUMULATE IN EXCAVATIONS OR POND ON-SITE. PROVIDE NECESSARY MEASURES TO KEEP THE SITE FREE-DRAINING.
3. NO SLOPE SHALL EXCEED 2:1 (H:V). ALL SLOPES STEEPER THAN 3:1 TO RECEIVE EXTENDED TERM EROSION CONTROL BLANKET.
4. TO PREVENT EROSION, ALL SLOPES 2:1 OR GREATER ARE TO BE TRACKED WITH A DOZER TO FORM CLEAT MARKS PARALLEL TO THE CONTOUR.
5. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY OR PERMANENT SOIL STABILIZATION AT THE CONSTRUCTION SITE MUST BE COMPLETED NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. IN THE FOLLOWING SITUATIONS, TEMPORARY STABILIZATION MEASURES ARE NOT REQUIRED:
   a. WHERE THE INITIATION OF STABILIZATION MEASURES IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS OR ADVERSE SOGGY GROUND CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
   b. WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, BUT SOIL DISTURBING ACTIVITIES WILL RESUME WITHIN 14 DAYS.
6. STEEP SLOPES (3:1 GRADE OR GREATER) SHALL BE STABILIZED NO LATER THAN SEVEN DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED.
7. PERMANENT STABILIZATION WITH PERENNIAL VEGETATION (USING NATIVE HERBACEOUS AND WOODY PLANTS WHERE PRACTICABLE) OR OTHER PERMANENTLY STABLE, NON-ERODING SURFACE SHALL REPLACE ANY TEMPORARY MEASURES AS SOON AS PRACTICABLE. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER RUNS WILL NOT BE CONSIDERED A NON-ERODING SURFACE.

LEGEND

- EXISTING CONTOUR (884)
- PROPOSED INDEX CONTOUR (890)
- PROPOSED SPOT ELEVATION (97.50)
- EXIST. STORM (ST)
- EXIST. SEWER (SA)
- EXIST. WATER (W)
- EXIST. FENCE
- EXIST. POWER POLE

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404 CLIFTON ROAD ⚠1
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OVERALL SITE GRADING AND DRAINAGE PLAN

JASON R. HUNT
REGISTERED ENGINEER
AGRICULTURE
No. 112481
STATE OF TENNESSEE
12/12/18

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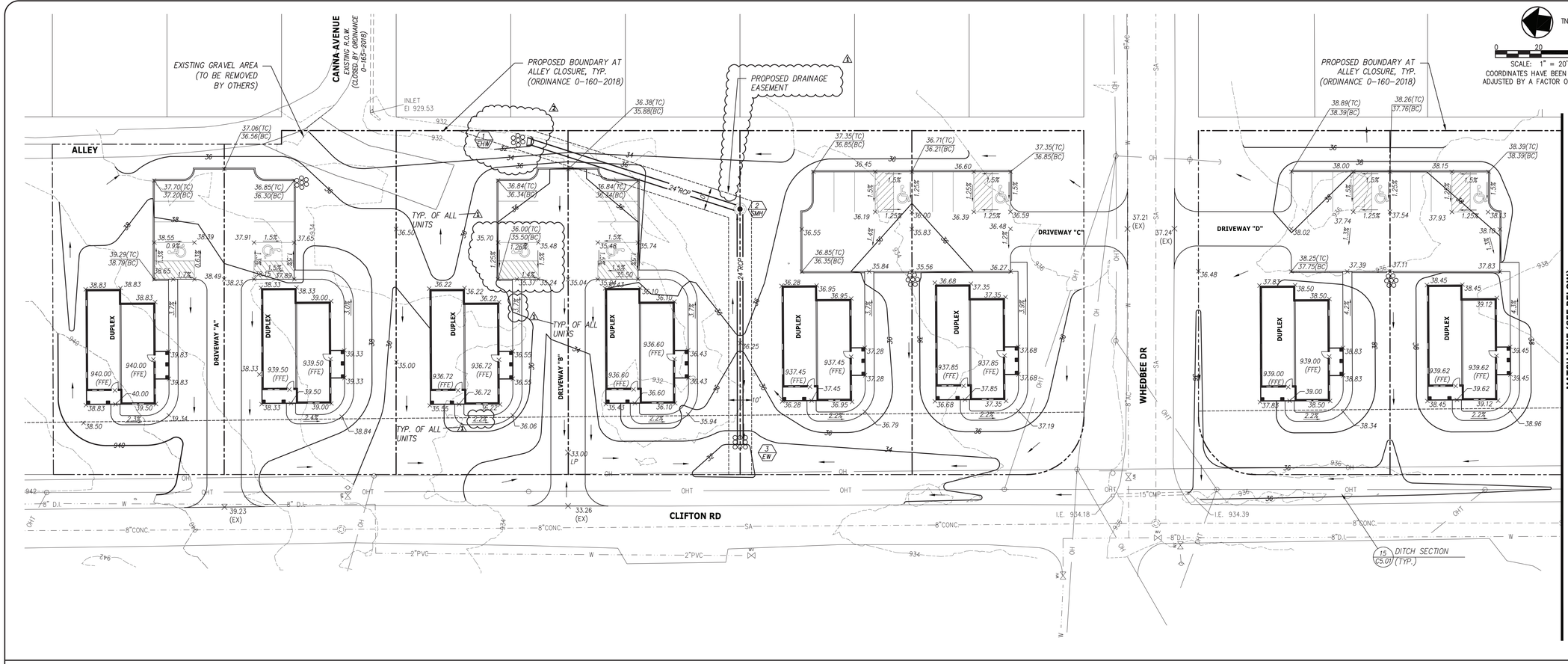
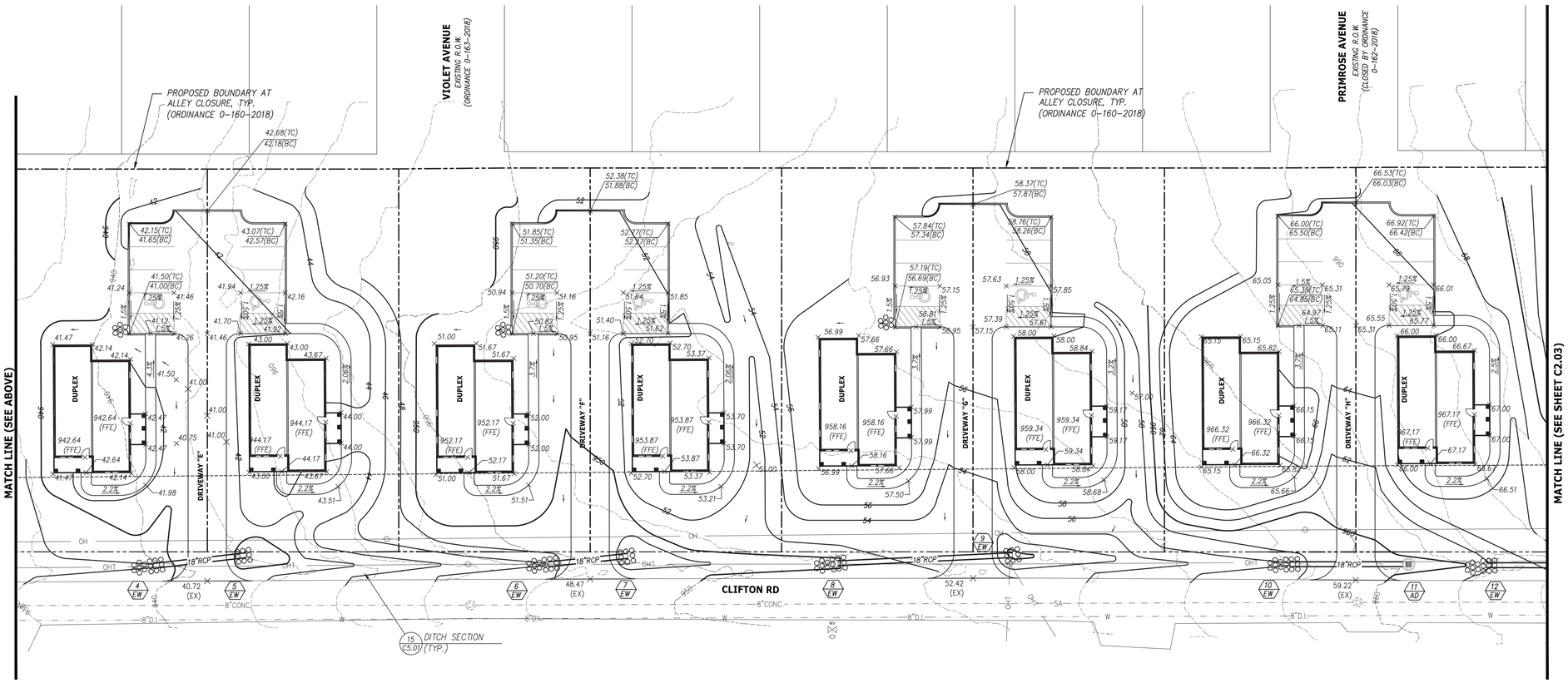
C3.01





NOTES:

1. SEE SHEET C3.01 FOR GRADING NOTES.
2. REFER TO DETAIL 22, SHEET C5.02 FOR STORM DATA TABLES AND STORM PIPE NOTES.

LEGEND

- EXISTING CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED DRAINAGE EASE.
- DETAIL REFERENCE (DETAIL NO./SHEET NO.)
- EXIST. STORM
- EXIST. SEWER
- EXIST. WATER
- EXIST. FENCE
- EXIST. POWER POLE

REVISIONS	DATE
⚠ REVISED PER CITY OF KNOXVILLE COMMENTS	12/12/2018
⚠ REVISED PER CITY OF KNOXVILLE COMMENTS	1/07/2019

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Knoxville, TN 37919

CLIENT:
KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION
901 N. BROADWAY ST.
KNOXVILLE, TENNESSEE 37917

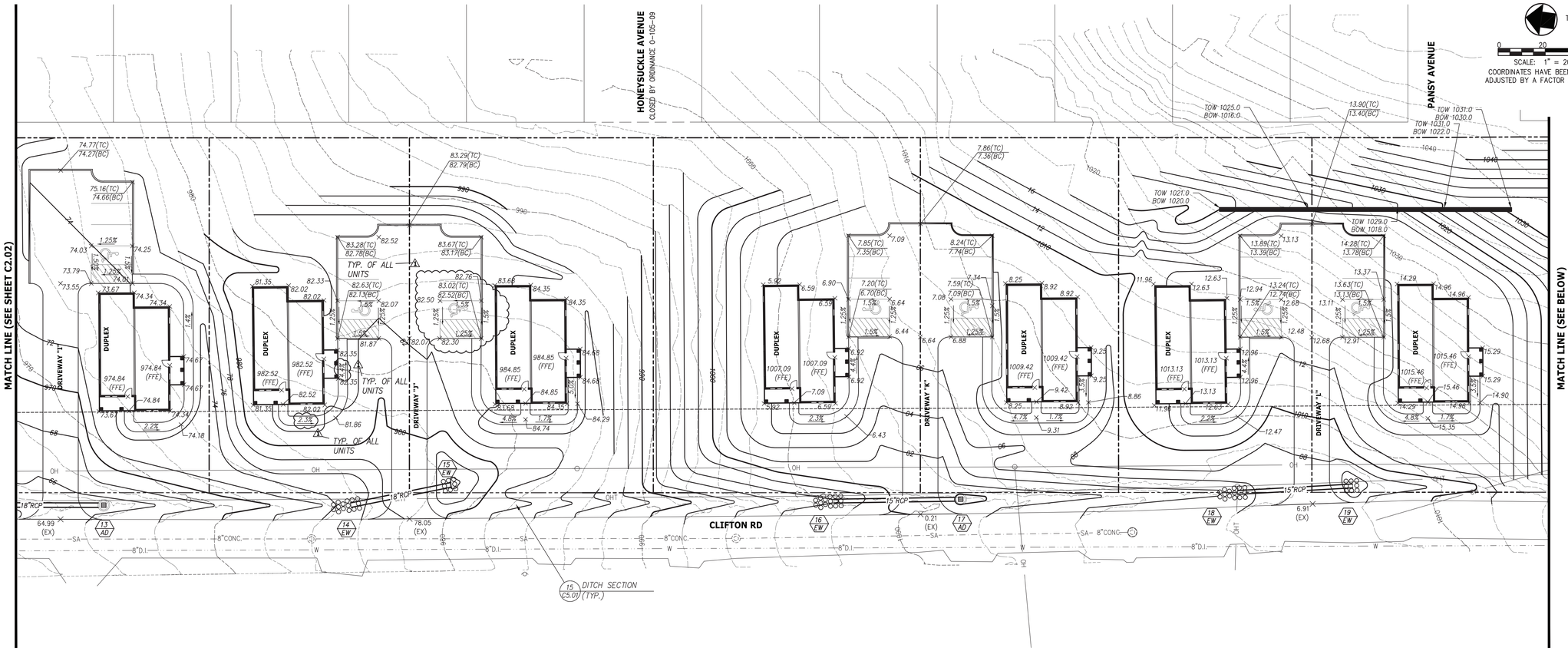
PROJECT:
CLIFTON ROAD DEVELOPMENT
404 CLIFTON ROAD ⚠
KNOXVILLE, TENNESSEE

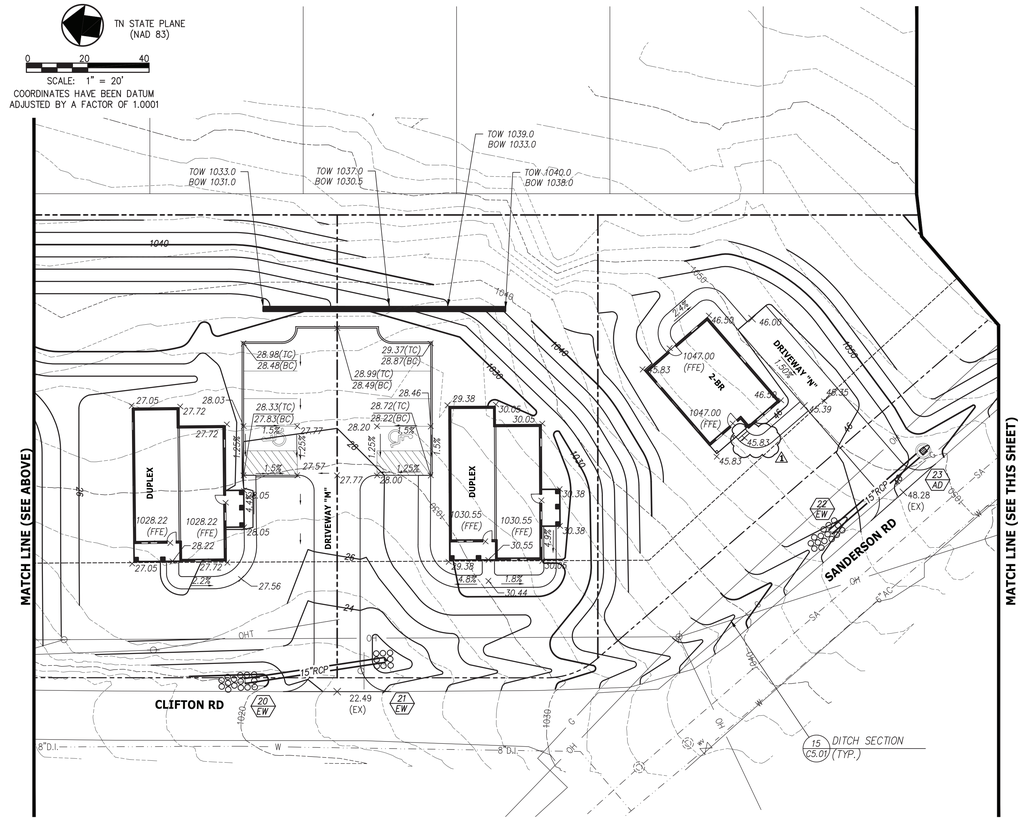
ENLARGED SITE GRADING AND DRAINAGE PLAN

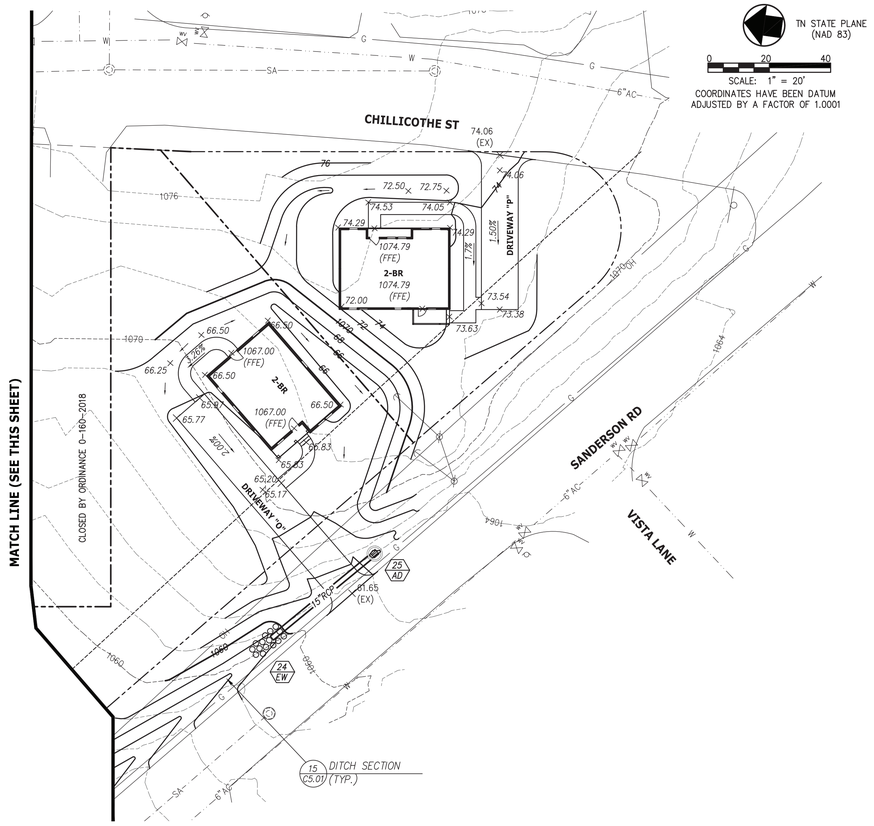
JASON R. HUNT — REGISTERED ENGINEER — AGRICULTURE — No. 112481 — STATE OF TENNESSEE — 01/07/19

CCI PROJECT NO.	00216-0005
DRAWING DATE	NOVEMBER 19, 2018
PM JRH	QC AWG
DRAWN LED	

C3.02







NOTES:

1. *SEE SHEET C3.01 FOR GRADING NOTES.*
2. *REFER TO DETAIL 22, SHEET C5.02 FOR STORM DATA TABLES AND STORM PIPE NOTES.*

LEGEND

- EXISTING CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED SPOT ELEVATION
- DETAIL REFERENCE (DETAIL NO./SHEET NO.)
- EXIST. STORM
- EXIST. SEWER
- EXIST. WATER
- EXIST. FENCE
- EXIST. POWER POLE

REVISIONS	DATE
1 REVISED PER CITY OF KNOXVILLE COMMENTS	12/12/2018

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901 N. BROADWAY ST.
KNOXVILLE, TENNESSEE 37917

PROJECT:
CLIFTON ROAD DEVELOPMENT
404 CLIFTON ROAD (1)
KNOXVILLE, TENNESSEE

ENLARGED SITE GRADING AND DRAINAGE PLAN

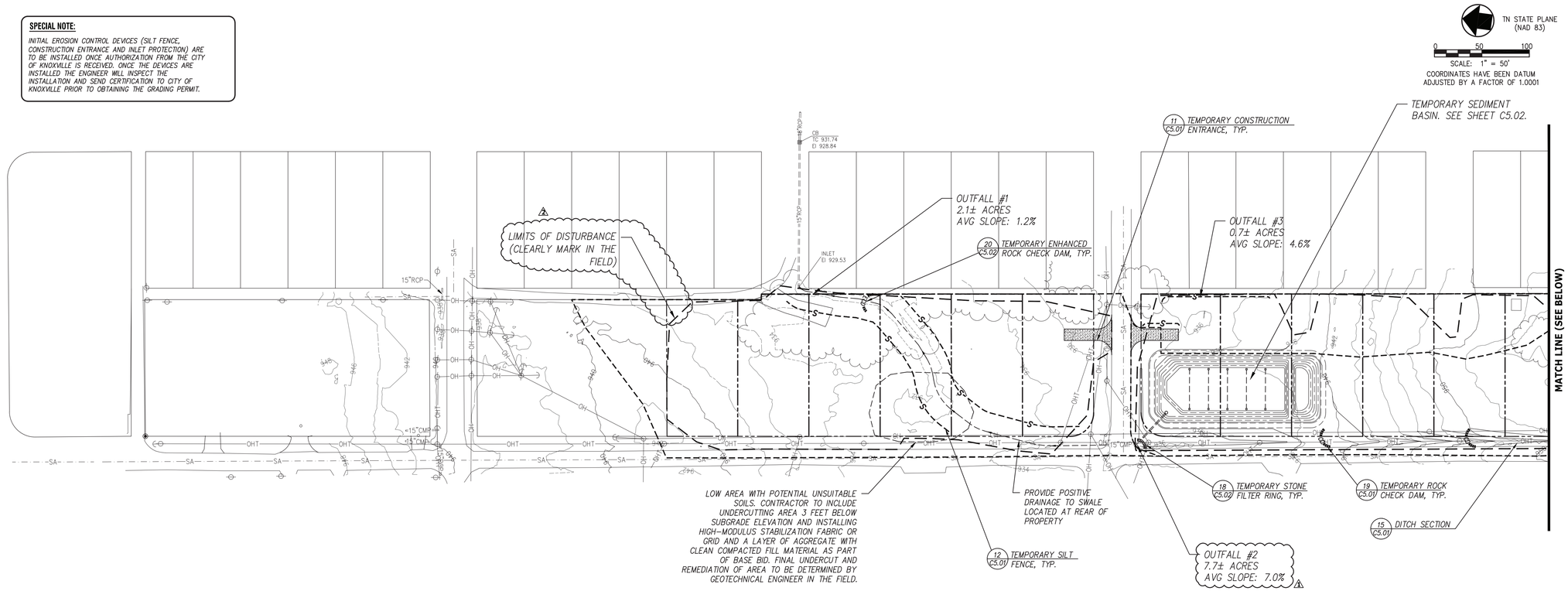
JASON R. HUNT — REGISTERED LANDSCAPE ARCHITECT — AGRICULTURE — No. 112487 — STATE OF TENNESSEE
12/12/18

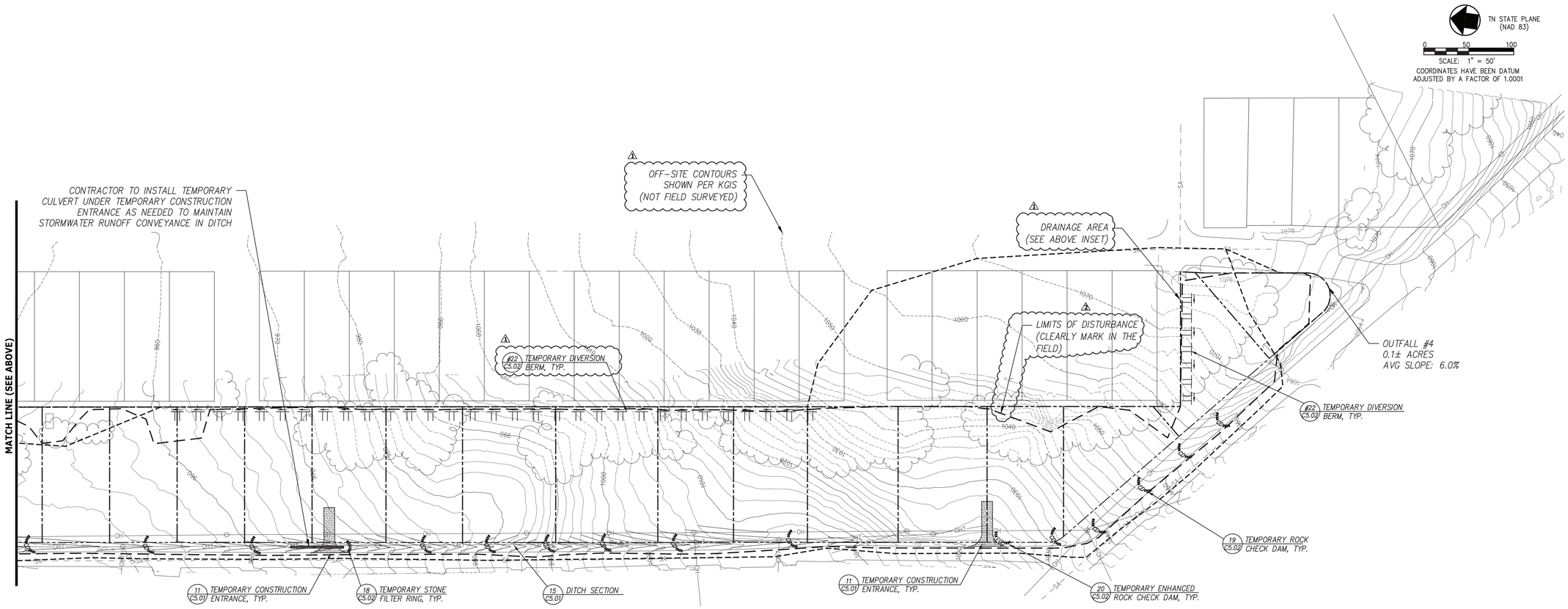
CCI PROJECT NO.	00216-0005
DRAWING DATE	NOVEMBER 19, 2018
PM JRH	QC AWG
DRAWN LED	

C3.03

SPECIAL NOTE:

INITIAL EROSION CONTROL DEVICES (SILT FENCE, CONSTRUCTION ENTRANCE AND INLET PROTECTION) ARE TO BE INSTALLED ONCE AUTHORIZATION FROM THE CITY OF KNOXVILLE IS RECEIVED. ONCE THE DEVICES ARE INSTALLED THE ENGINEER WILL INSPECT THE INSTALLATION AND SEND CERTIFICATION TO CITY OF KNOXVILLE PRIOR TO OBTAINING THE GRADING PERMIT.





NOTES:

1. *SEE SHEET C3.01 FOR GRADING NOTES.*

LEGEND

- *EXISTING CONTOUR*
- *PROPOSED CONTOUR*
- *DETAIL REFERENCE (DETAIL NO./SHEET NO.)*
- *TEMPORARY DIVERSION BERM*
- *DIRECTIONAL FLOW ARROW*
- *TEMPORARY SEDIMENT LOG*
- *TEMPORARY ENHANCED ROCK CHECK DAM*
- *TEMPORARY ROCK CHECK DAM*
- *TEMPORARY STONE FILTER RING*
- *TEMPORARY SEDIMENT BARRIER*
- *TEMPORARY DOUBLE ROW SILT FENCE WITH WIRE BACKING*
- *PROPOSED LIGHT DUTY ASPHALT PAVEMENT*
- *PROPOSED CONCRETE PAVEMENT*

REVISIONS	DATE
1 REVISED PER CITY OF KNOXVILLE COMMENTS	12/12/2018
2 REVISED PER CITY OF KNOXVILLE COMMENTS	1/07/2019

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KNOXVILLE, TENNESSEE 37917

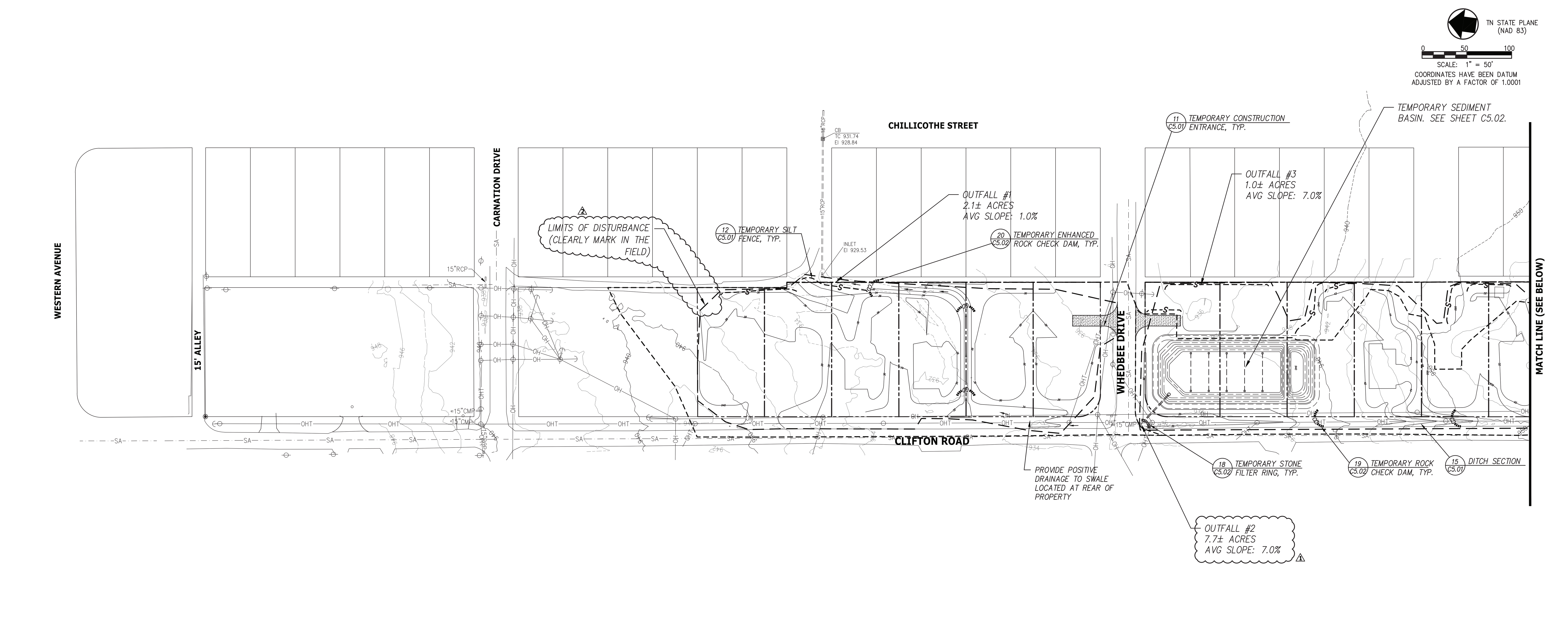
PROJECT:
CLIFTON ROAD DEVELOPMENT
404 CLIFTON ROAD 2
KNOXVILLE, TENNESSEE

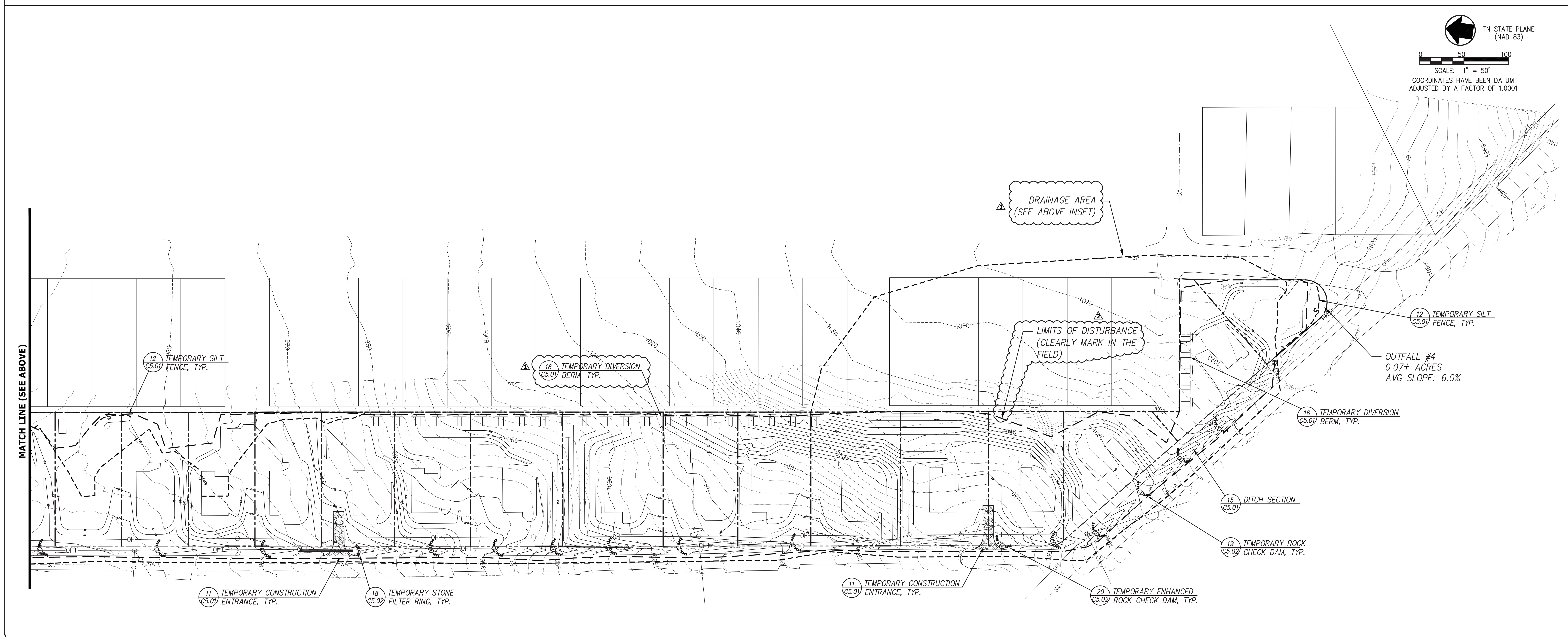
INITIAL EROSION CONTROL PLAN

JASON R. HUNT REGISTERED ENGINEER AGRICULTURE ENVIRONMENT CONSERVATION No. 112481 STATE OF TENNESSEE

CCI PROJECT NO.	00216-0005
DRAWING DATE	NOVEMBER 19, 2018
PM JRH	QC AWG
DRAWN LED	

C4.01





NOTES:

1. SEE SHEET C3.01 FOR GRADING NOTES.

LEGEND

- 884 — EXISTING CONTOUR
- 884 — PROPOSED CONTOUR
- # / C5.01 — DETAIL REFERENCE (DETAIL NO./SHEET NO.)
- TEMPORARY DIVERSION BERM
- DIRECTIONAL FLOW ARROW
- TEMPORARY SEDIMENT LOG
- ECD — TEMPORARY ENHANCED ROCK CHECK DAM
- CD — TEMPORARY ROCK CHECK DAM
- TEMPORARY STONE FILTER RING
- S — TEMPORARY SEDIMENT BARRIER
- S — TEMPORARY DOUBLE ROW SILT FENCE WITH WIRE BACKING
- PROPOSED LIGHT DUTY ASPHALT PAVEMENT
- PROPOSED CONCRETE PAVEMENT

REVISIONS	DATE
2 REVISED PER CITY OF KNOXVILLE COMMENTS	12/12/2018
3 REVISED PER CITY OF KNOXVILLE COMMENTS	1/07/2019

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KNOXVILLE, TENNESSEE 37917

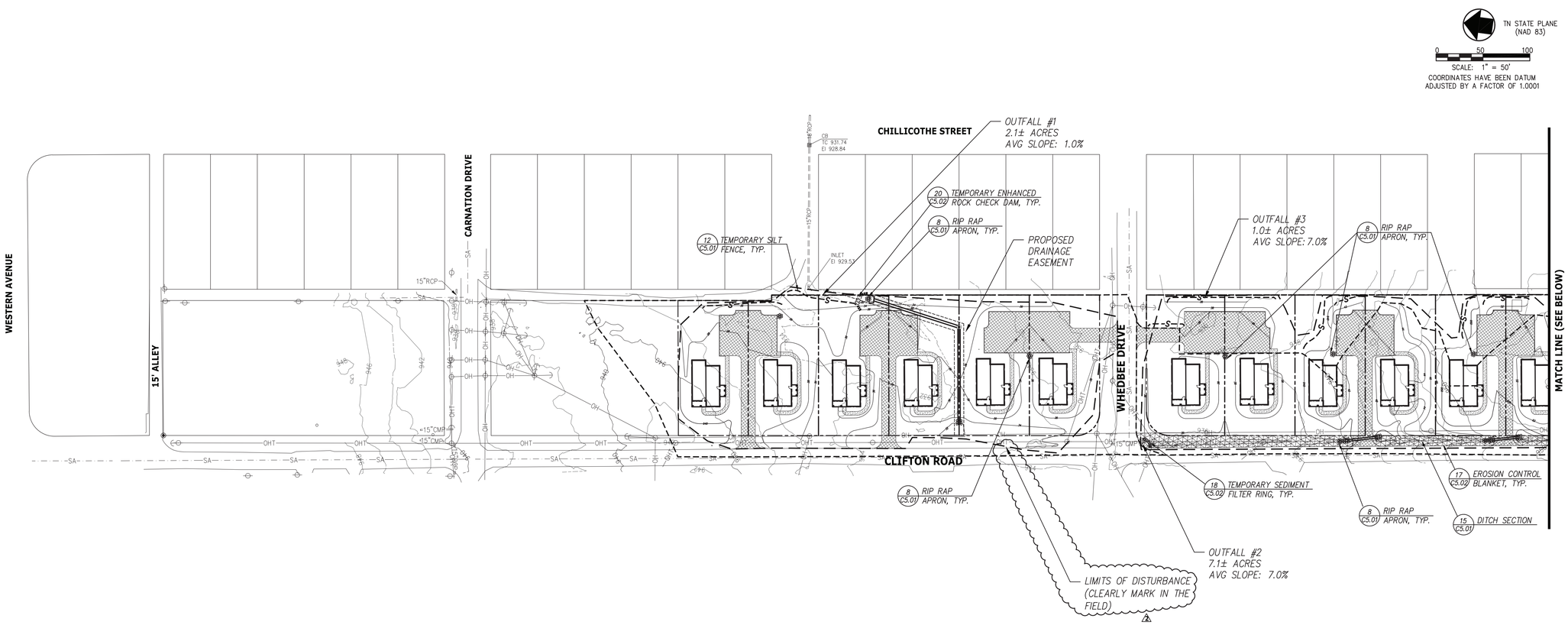
PROJECT: **CLIFTON ROAD DEVELOPMENT**
404 CLIFTON ROAD
KNOXVILLE, TENNESSEE

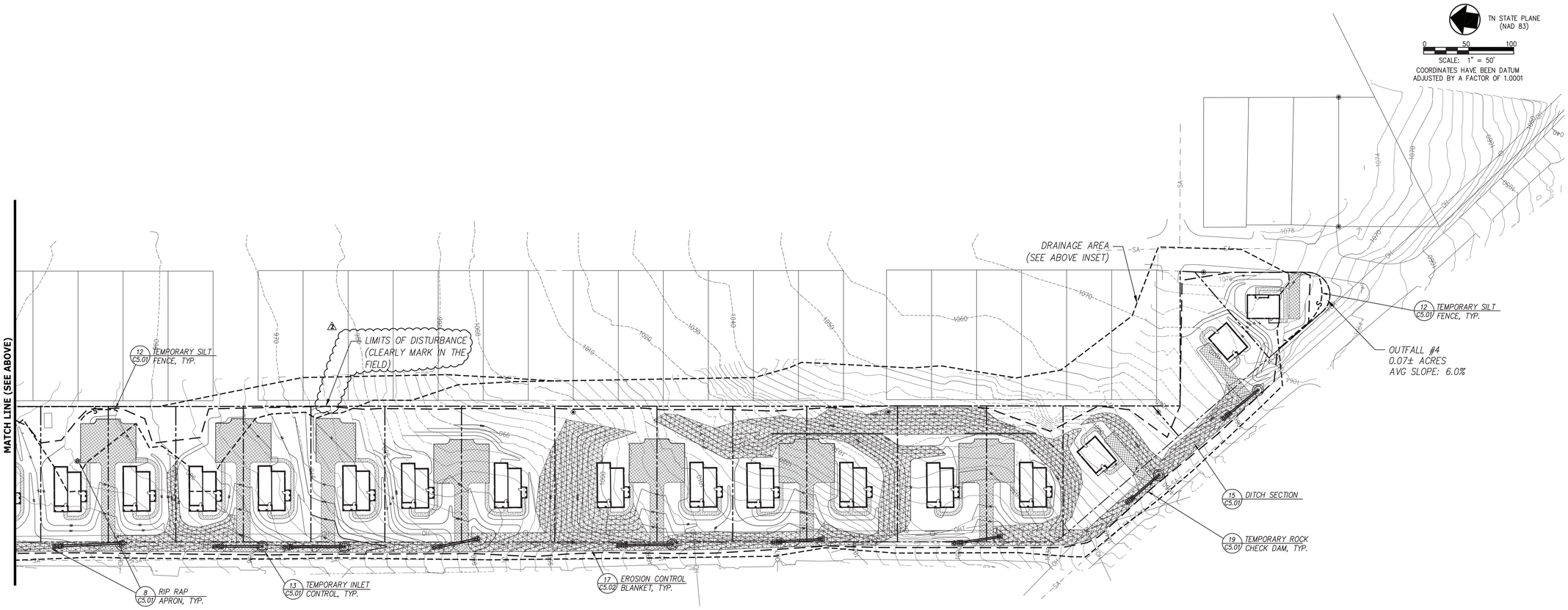
INTERMEDIATE EROSION CONTROL PLAN

JASON R. HUNT — REGISTERED ENGINEER — AGRICULTURE COMMERCE — No. 112487 — STATE OF TENNESSEE — 01/07/19

CCI PROJECT NO.	00216-0005
DRAWING DATE	NOVEMBER 19, 2018
PM JRH	QC AWG
DRAWN LED	

C4.02





NOTES:

1. *SEE SHEET C4.01 FOR GENERAL GRADING AND DRAINAGE NOTES.*

LEGEND

- *EXISTING CONTOUR*
- *PROPOSED CONTOUR*
- *DETAIL REFERENCE (DETAIL NO./SHEET NO.)*
- *TEMPORARY DIVERSION BERM*
- *DIRECTIONAL FLOW ARROW*
- *TEMPORARY SEDIMENT LOG*
- *TEMPORARY ENHANCED ROCK CHECK DAM*
- *TEMPORARY ROCK CHECK DAM*
- *TEMPORARY STONE FILTER RING*
- *TEMPORARY SEDIMENT BARRIER*
- *TEMPORARY DOUBLE ROW SILT FENCE WITH WIRE BACKING*
- *PROPOSED LIGHT DUTY ASPHALT PAVEMENT*
- *PROPOSED CONCRETE PAVEMENT*
- *EROSION CONTROL BLANKET*

REVISIONS	DATE
⚠1 REVISED PER CITY OF KNOXVILLE COMMENTS	12/12/2018
⚠2 REVISED PER CITY OF KNOXVILLE COMMENTS	1/07/2019

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KNOXVILLE, TENNESSEE 37917

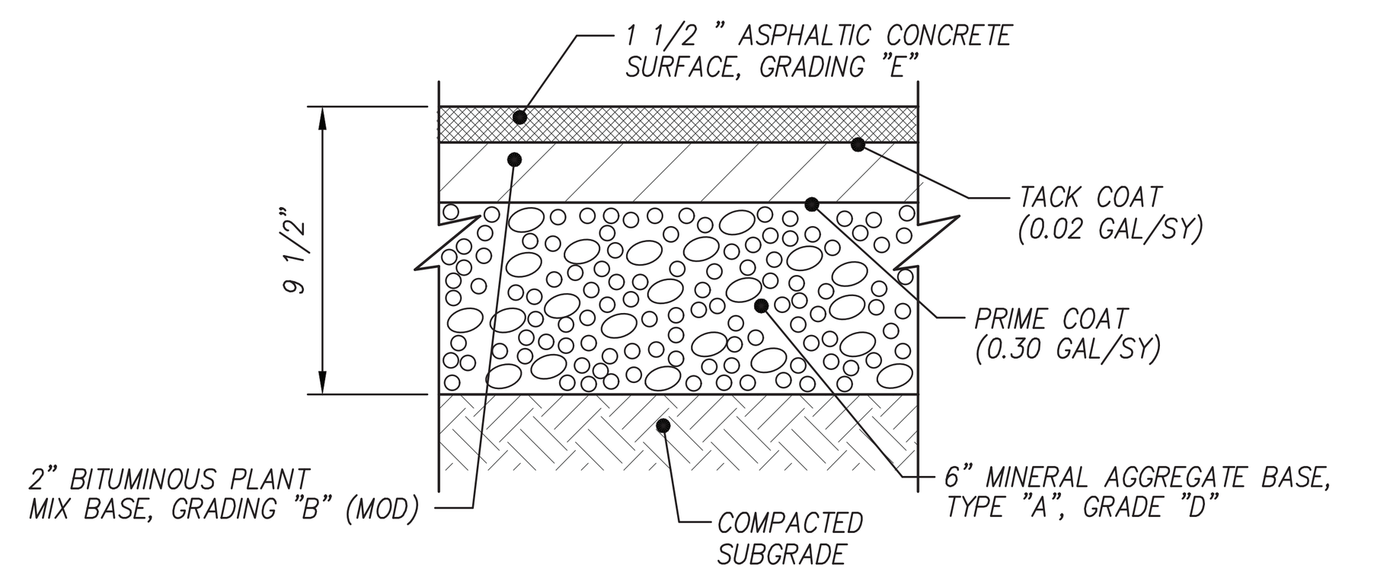
PROJECT:
CLIFTON ROAD DEVELOPMENT
404 CLIFTON ROAD ⚠2
KNOXVILLE, TENNESSEE

FINAL EROSION CONTROL PLAN

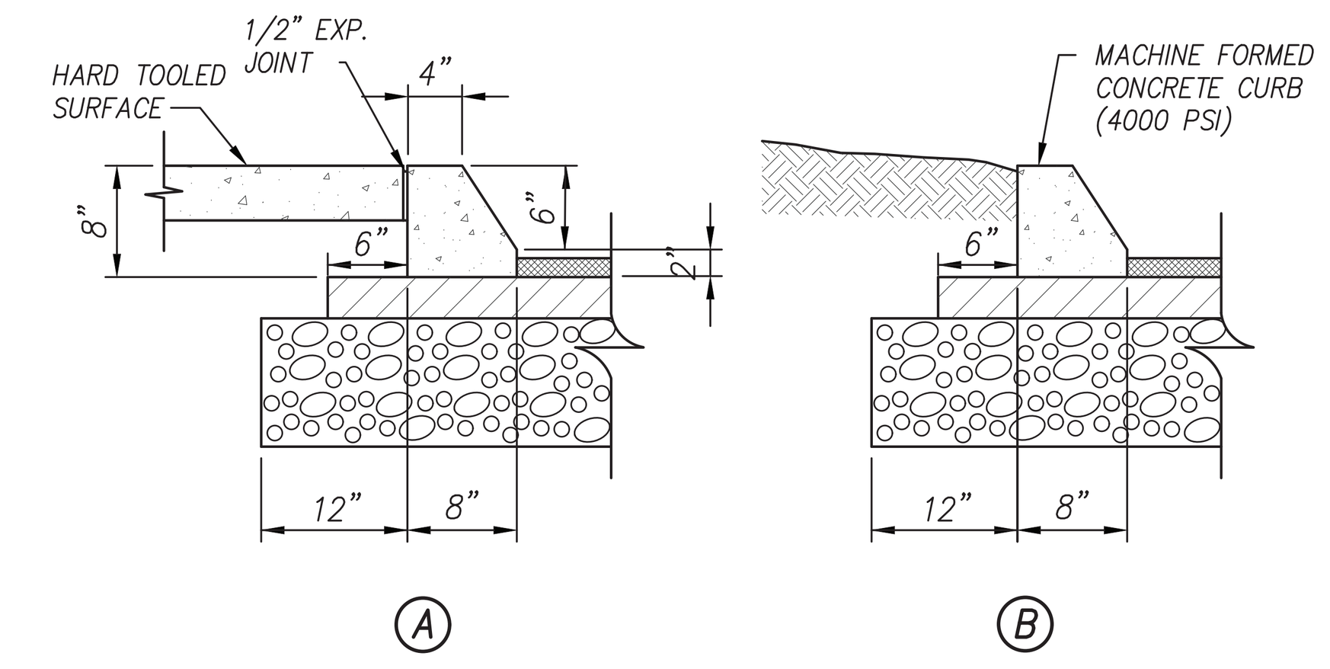
JASON R. HUNTER · REGISTERED ENGINEER · AGRICULTURE · No. 112481 · STATE OF TENNESSEE
01/07/19

CCI PROJECT NO.	00216-0005
DRAWING DATE	NOVEMBER 19, 2018
PM JRH	QC AWG
DRAWN LED	

C4.03

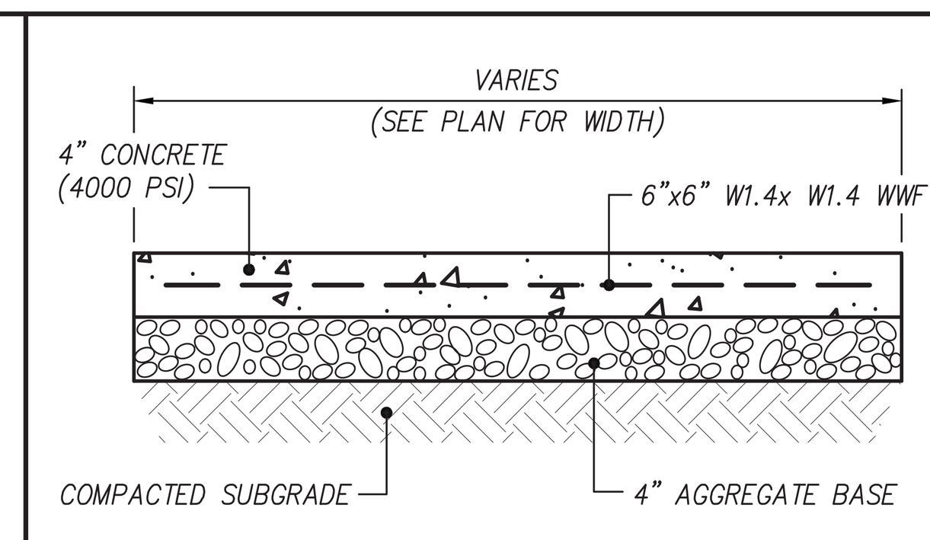


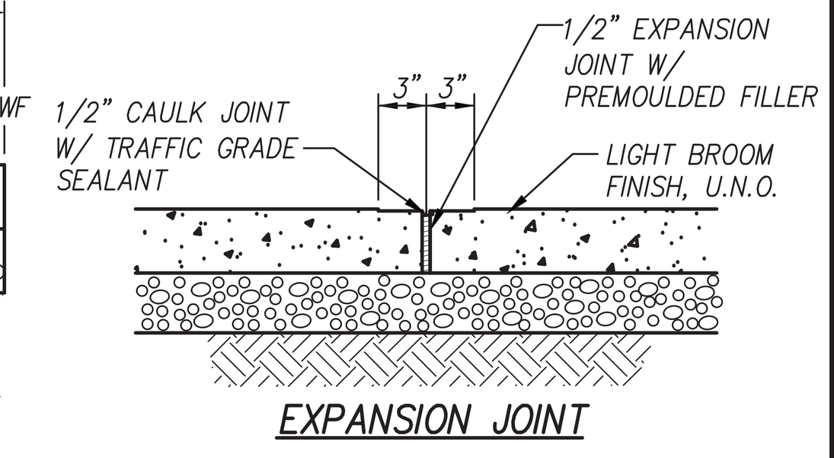
1 LIGHT DUTY ASPHALT SECTION
C1.02 N.T.S.

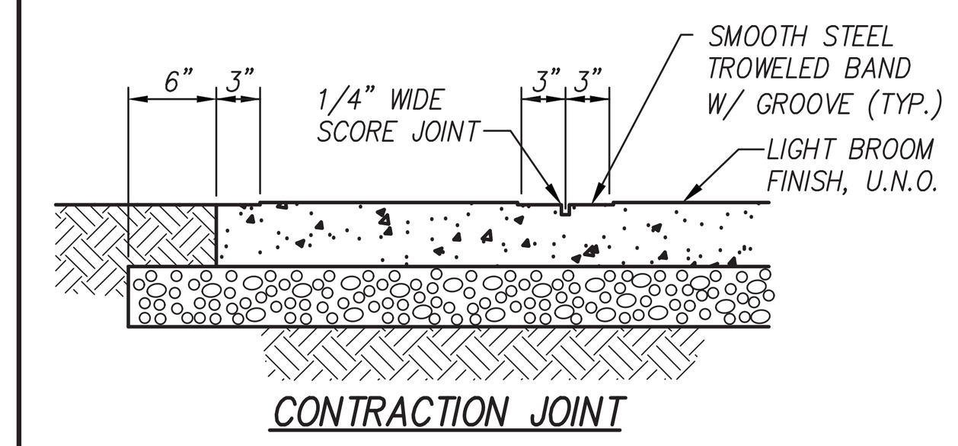


NOTES:
1. PREFORMED 1/2" EXPANSION JOINTS SHALL BE EQUALLY SPACED AT 30' MAX. CENTERS. EQUALLY SPACE 1/4" CONTRACTION JOINTS AT 10' MAX. CENTERS BETWEEN EXPANSION JOINTS.
2. EXACT CURB DIMENSIONS MAY BE ALTERED SLIGHTLY TO FIT STANDARD EXTRUDED CURB MACHINES, BUT SUCH VARIANCES MUST BE APPROVED BY THE ENGINEER.

2 EXTRUDED CURB
C1.02 N.T.S.

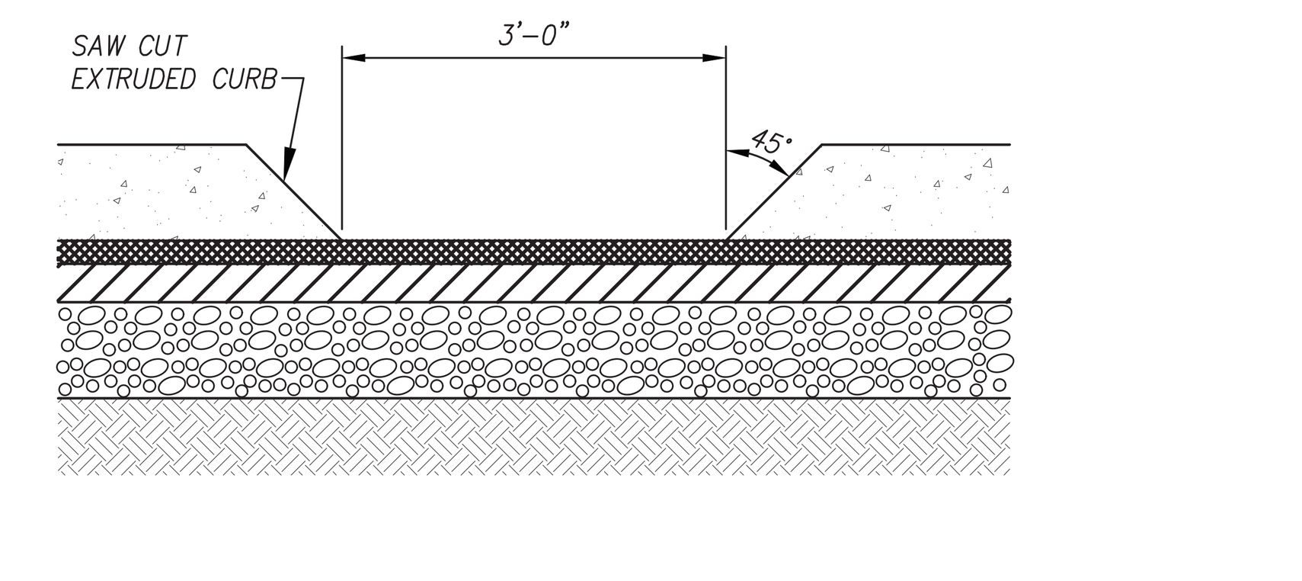






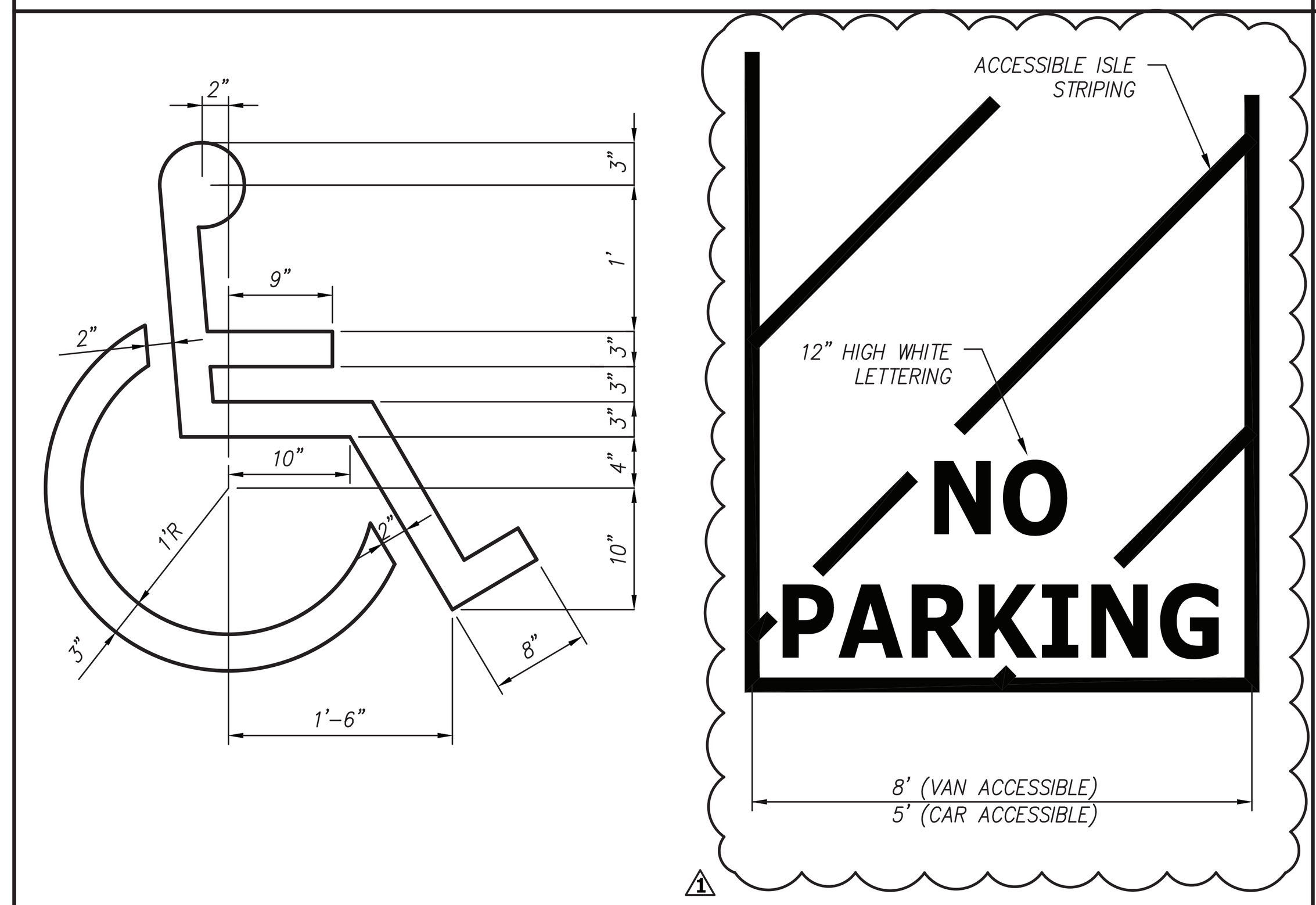
NOTES:
1. MINERAL AGGREGATE BASE SHALL BE CRUSHED STONE, CLASS "A" AGGREGATE, GRADING "D".
2. PREFORMED EXPANSION JOINTS SHALL BE EQUALLY SPACED AT 20' O.C. AND WHERE THE SIDEWALK IS IN CONTACT WITH STREET RETURNS, ON BUILDING LINES, WHERE WALKS LEAD TO BUILDING ENTRANCES, AT FIXED OBJECTS AND OTHER LOCATIONS WHERE STRESSES MAY DEVELOP.
3. EQUALLY SPACE CONTRACTION JOINTS AT 5' O.C. (MAX.) BETWEEN EXPANSION JOINTS.
4. SIDEWALK SHALL BE SLOPED AWAY FROM BUILDING. CONCRETE SURFACE TO BE MEDIUM BROOM FINISH WITH A 4" TOOLED EDGE AND JOINT.
5. SIDEWALKS WHICH DO NOT MEET ADA STANDARDS WITH REGARD TO RUNNING SLOPE AND CROSS SLOPES WILL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

3 CONCRETE SIDEWALK
C1.02 N.T.S.

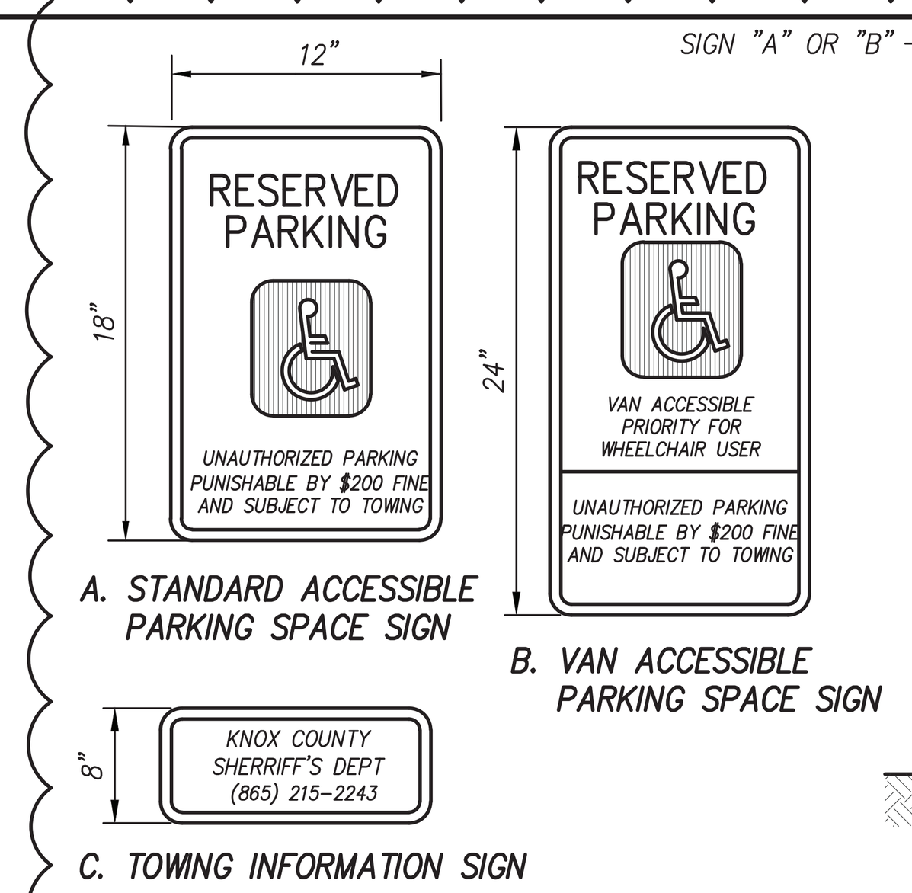


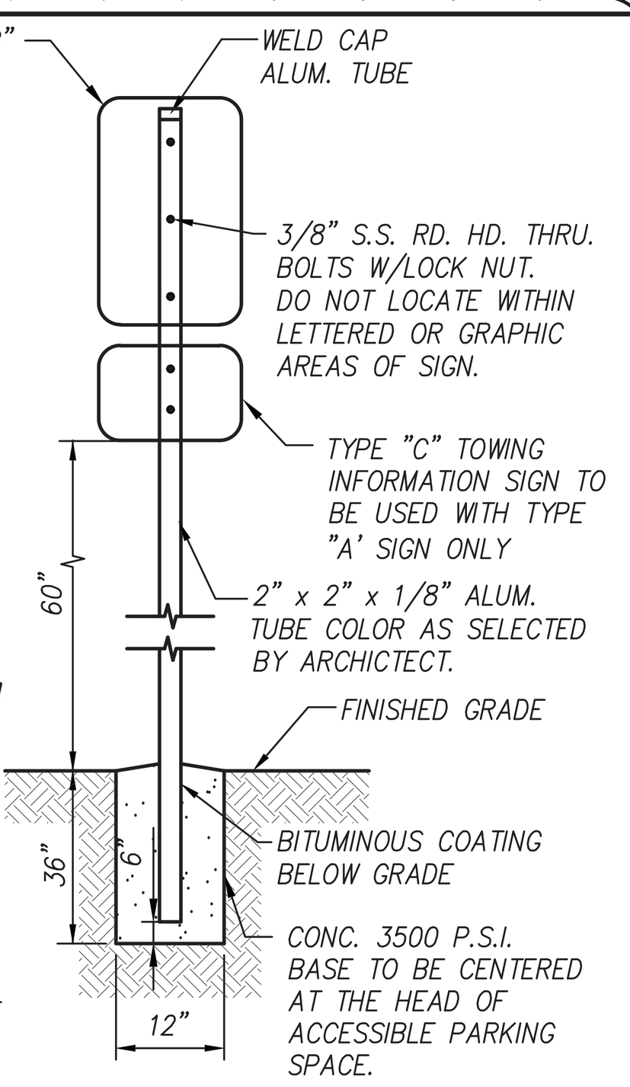
NOTES:
1. CONTRACTOR TO SAW CUT EXISTING CONCRETE EXTRUDED CURB TO PROVIDE DRAINAGE FROM BEHIND THE CURB.

4 CURB CUT
C1.02 N.T.S.



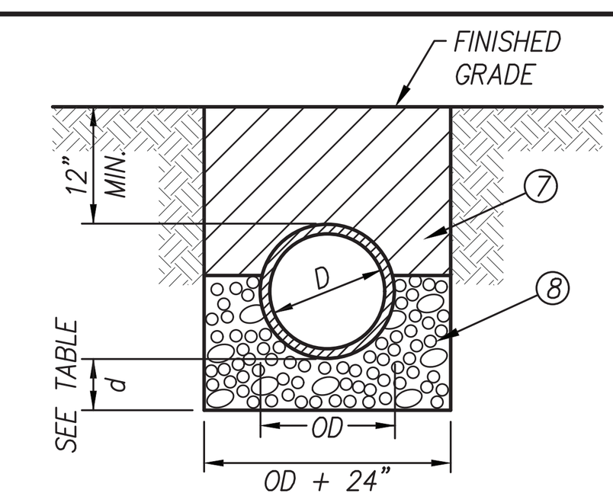
5 ACCESSIBLE SYMBOL AND STRIPING
C1.02 N.T.S.



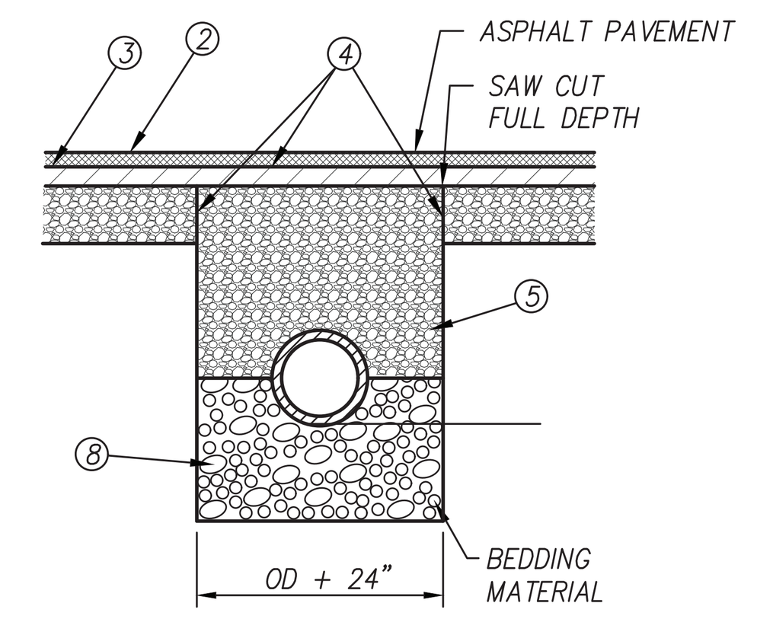


NOTES:
1. USE TYPE R7-8 AND R7-8P SIGNAGE
2. COLORS: LEGEND AND BORDER – GREEN WHITE SYMBOL ON BLUE BACKGROUND
3. ALL VEHICLE AND PEDESTRIAN SIGNS SHALL BE MUTCD COMPLIANT
4. TOWING INFORMATION SHALL APPEAR ON AT LEAST ONE SIGN AT EACH GROUP OF ACCESSIBLE PARKING SPACES.
5. CONTRACTOR SHALL COORDINATE WITH OWNER TO CONFIRM INFORMATION FOR TOWING INFORMATION SIGN

6 ACCESSIBLE PARKING SIGN
C1.02 N.T.S.

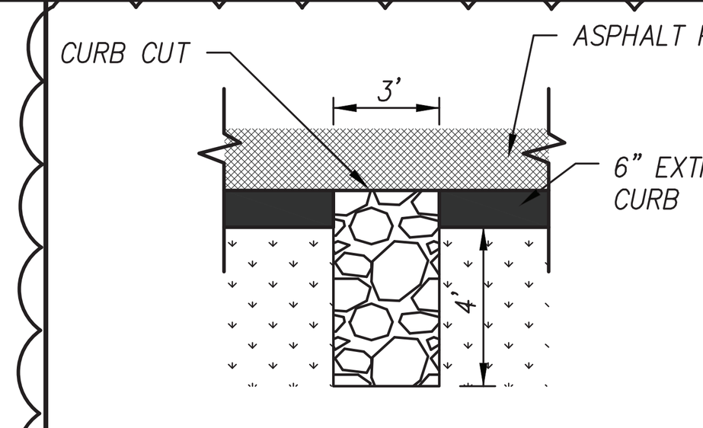


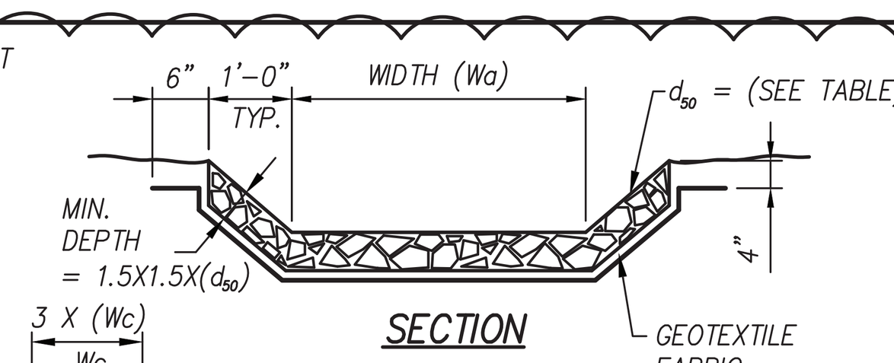
D	d (MIN.)
27" AND SMALLER	3"
30" TO 60"	4"
66" AN LARGER	6"
DEPTH OF BEDDING MATERIAL BELOW PIPE	

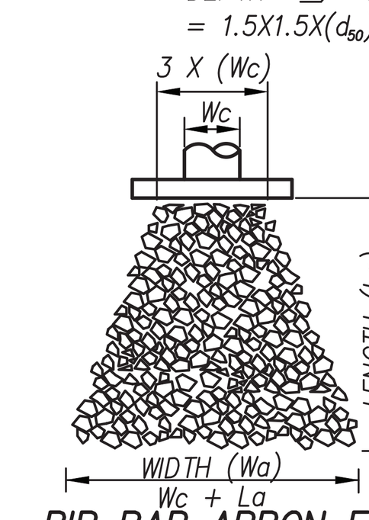


NOTES;
1. ALL SECTIONS NOTED BELOW REFERENCE THE CITY OF KNOXVILLE STANDARD SPECIFICATIONS UNLESS OTHERWISE SPECIFIED.
2. ASPHALTIC CONCRETE SURFACE, GRADING D, SECTION 10.0. MATCH EXISTING DEPTH OR MIN. THICKNESS OF 1.5".
3. BITUMINOUS PLANT MIX BASE, GRADING B, B-M, OR C, SECTION 9.0. MATCH EXISTING DEPTH OR MIN. THICKNESS OF 2.5". THE ENTIRE 4" MIN. DEPTH MAY BE ASPHALTIC CONCRETE SURFACE GRADING D, BUT SHALL BE COMPACTED IN TWO LIFTS.
4. TACK COAT, SECTION 7.0.
5. MINERAL AGGREGATE BASE, CLASS A AGGREGATE GRADING D, SECTION 5.0. COMPACTED IN 6" LIFTS TO 100% OF THE STANDARD PROCTOR DENSITY AT 2% LESS THAN OPTIMUM MOISTURE CONTENT AS DETERMINED BY AASHTO T99, METHOD D. APPROXIMATELY 140 PCF FOR LIMESTONE.
6. WHEN A TEMPORARY ASPHALT PATCH IS USED, IT SHALL BE PLACED IMMEDIATELY AFTER THE MINERAL AGGREGATE BACKFILL. ALL TEMPORARY REPAIRS MUST BE REPLACED PERMANENTLY WITHIN 90 DAYS.
7. COMPACTED BACKFILL SHALL BE IN ACCORDANCE WITH SECTION 20.0. BACKFILL MATERIAL IN THE ROADWAY OR WITHIN FIVE (5) FEET OF THE ROADWAY, UNDER CURBS, GUTTERS, AND SIDEWALKS SHALL MEET THE REQUIREMENTS OF SECTION 5.0 (MINERAL AGGREGATE BASE).
8. BEDDING MATERIAL, GRADING SIZE NO. 57 OR NO. 67, SHALL BE IN ACCORDANCE WITH SECTION 20.0.

7 PIPE BEDDING & BACKFILL
C3.01 N.T.S. (SHALL BE USED IN AREAS INCLUDING COK R.O.W.)

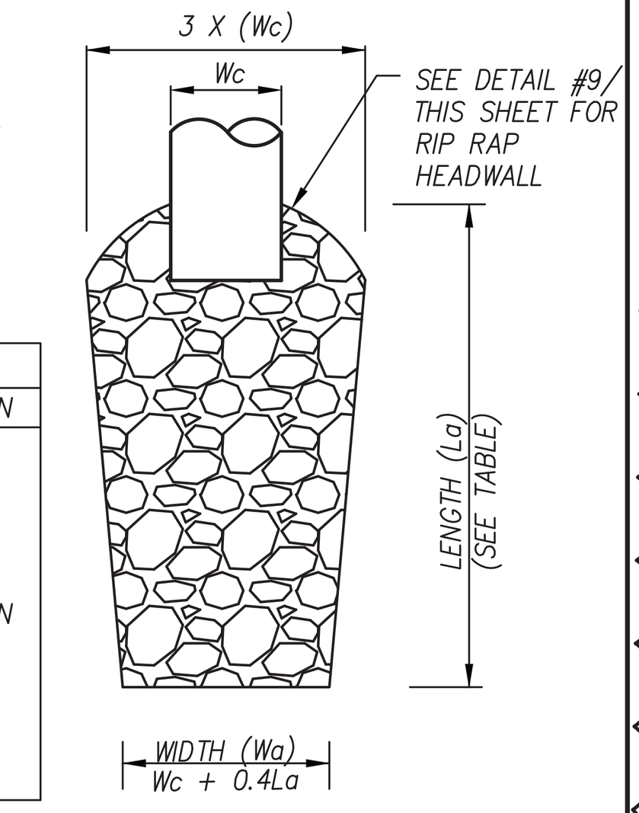




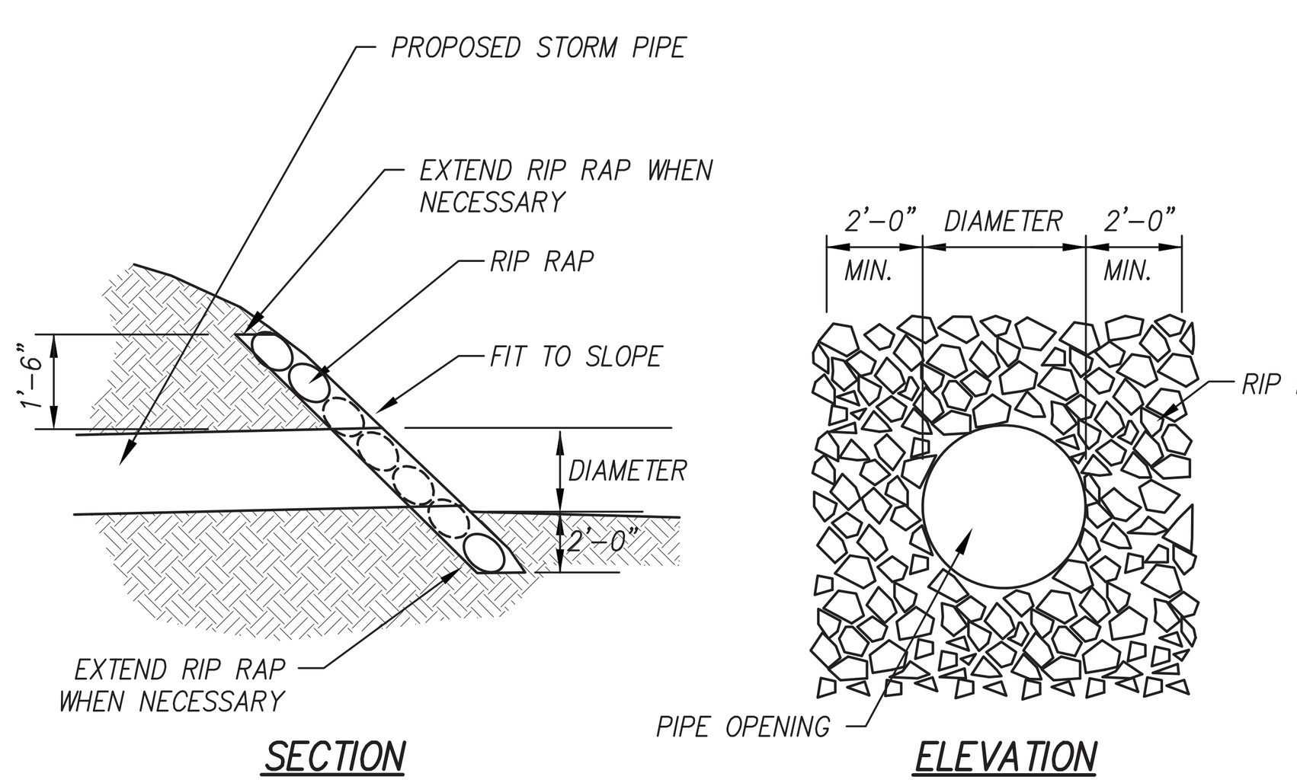


NOTES:
1. GEOTEXTILE FABRIC SHALL BE SYNTHETIC INDUSTRIES EROSION XV OR EQUAL.
2. SEE TABLE THIS DETAIL FOR ROCK SIZE AND APRON LENGTH FOR PIPE OUTFALLS. RIP RAP APRON AT PARKING LOT CURB CUTS SHALL BE $D_{50} = 4"$.
3. ALL ROCK SHALL BE HANDPLACED AND IN A MANNER TO MINIMIZE VOIDS.
4. FOR ADDITIONAL REQUIREMENTS SEE CITY OF KNOXVILLE BMP; OUTLET PROTECTION, ES-25-1.
5. EHW-1 INCLUDES AN ENERGY DISSIPATING HEADWALL WHICH REDUCES THE OUTLET VELOCITY LESS THAN 5 FEET PER SECOND; THEREFORE, A RIP-RAP APRON IS NOT REQUIRED. HOWEVER, A RIP-RAP APRON HAS BEEN INCLUDED.

STRUCTURE	La	D_{50}
EHW-1	6 FT	6 IN
EW-4 EW-6 EW-8 EW-10 EW-12 EW-14 EW-16 EW-18 EW-20 EW-22 EW-24	8 FT	6 IN

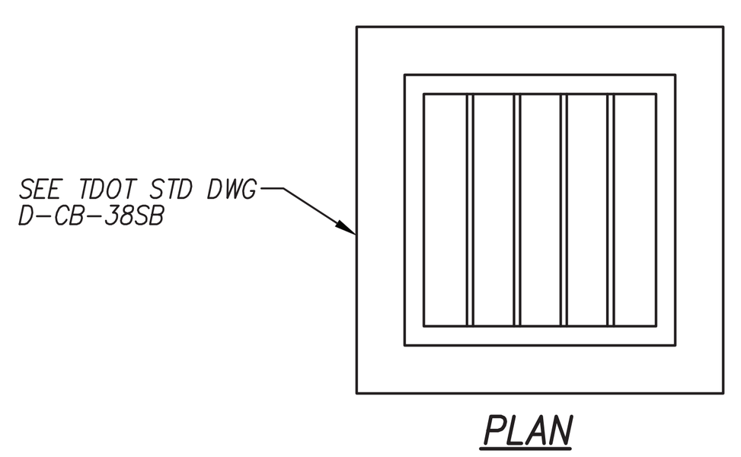


8 RIP-RAP APRON
C3.02 N.T.S.

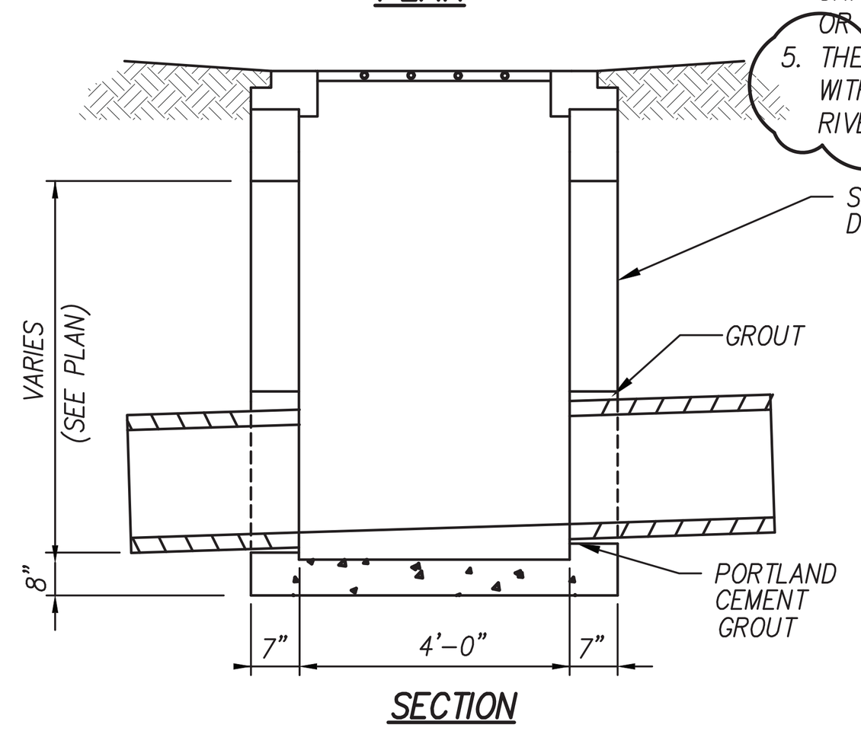


NOTES:
1. RIP RAP SHALL BE $d_{50} = 12"$ UNLESS OTHERWISE NOTED SELECTION TO BE APPROVED BY ENGINEER AND OWNER AND SHALL MEET ALL REQUIREMENTS PER CITY OF KNOXVILLE BMP MANUAL.
2. RIP RAP HEADWALL TO BE INSTALLED AT ALL PIPE INLETS AND PIPE OUTLETS NOTED ON THE PLANS.

9 RIP RAP HEADWALL
C3.02 N.T.S.

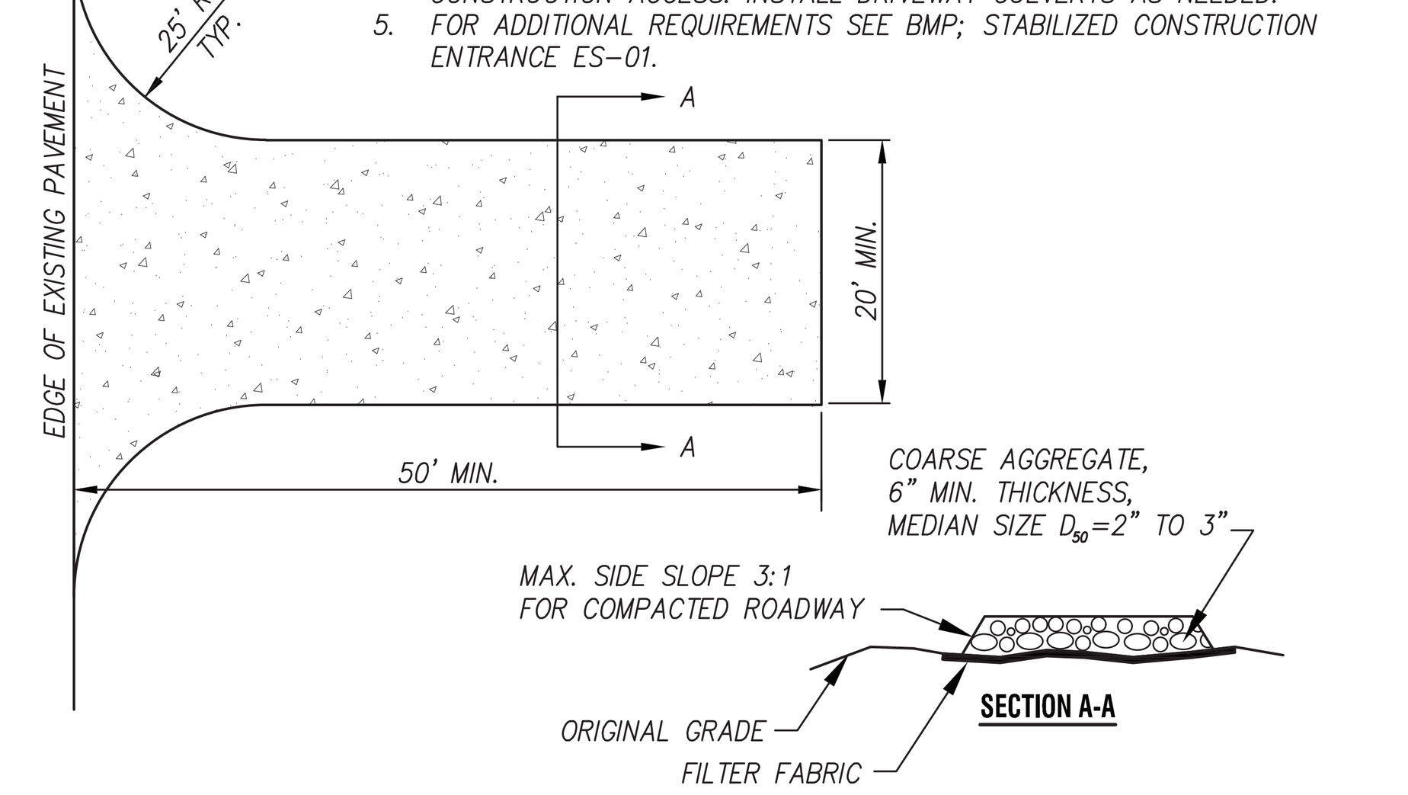


NOTES:
1. AREA DRAINS SHALL BE 4'X4' SQ. CONCRETE AREA DRAIN TDOT NO. 38.
2. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.
3. COORDINATES AND TC ELEVATIONS TAKEN AT CENTER OF THE STRUCTURE.
4. AREA DRAIN FRAME AND GRATE SHALL BE TDOT GRATE UNIT NO. 38 OR EQUAL.
5. THE FRAME SHALL BE STAMPED WITH "NO DUMPING... DRAINS TO RIVER" OR EQUAL.

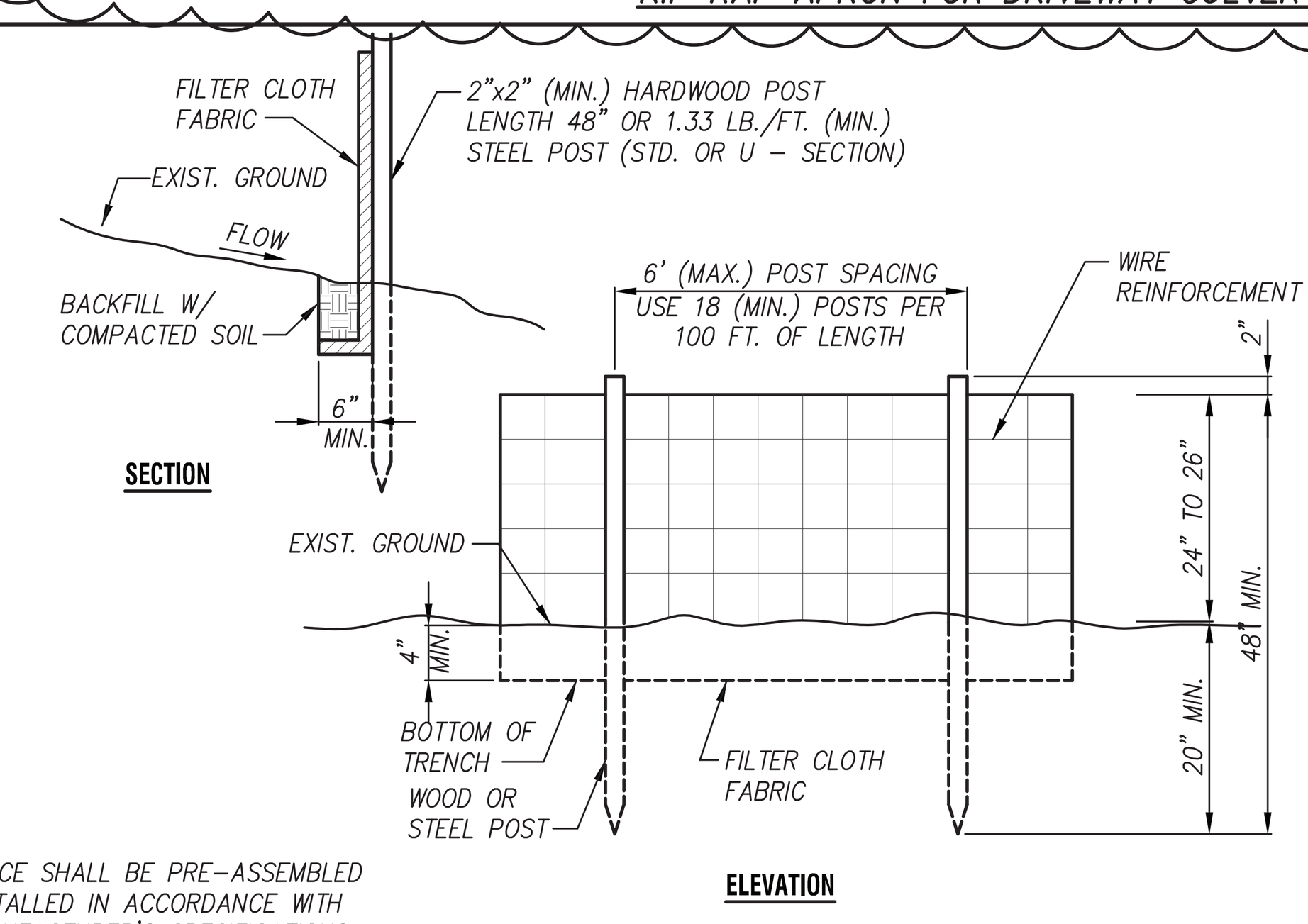


10 AREA DRAIN
C3.02 N.T.S.

NOTES:
1. THE PURPOSE OF THE STABILIZED CONSTRUCTION ENTRANCE IS TO AID THE CONTRACTOR IN ELIMINATING TRACKING OF MUD ONTO PUBLIC STREETS. THIS DETAIL DOES NOT LIMIT THIS RESPONSIBILITY. OTHER METHODS OF SEDIMENT REMOVAL SHALL BE IMPLEMENTED IF THIS DOES NOT ADEQUATELY REMOVE THE MUD.
2. CONSTRUCT THE PAD WITH A 6" (MIN.) THICKNESS OF 2" TO 3" CRUSHED STONE PLACED ON TOP OF MEDIUM TO HEAVY GEOTEXTILE SUITABLE FOR MATERIAL SEPARATION APPLICATIONS.
3. ADD CRUSHED STONE TO THE PAD AS NECESSARY TO MAINTAIN THE PROPER FUNCTIONING OF THE PAD.
4. LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR TO ADJUST BASED ON CONSTRUCTION ACCESS. INSTALL DRIVEWAY CULVERTS AS NEEDED.
5. FOR ADDITIONAL REQUIREMENTS SEE BMP; STABILIZED CONSTRUCTION ENTRANCE ES-01.

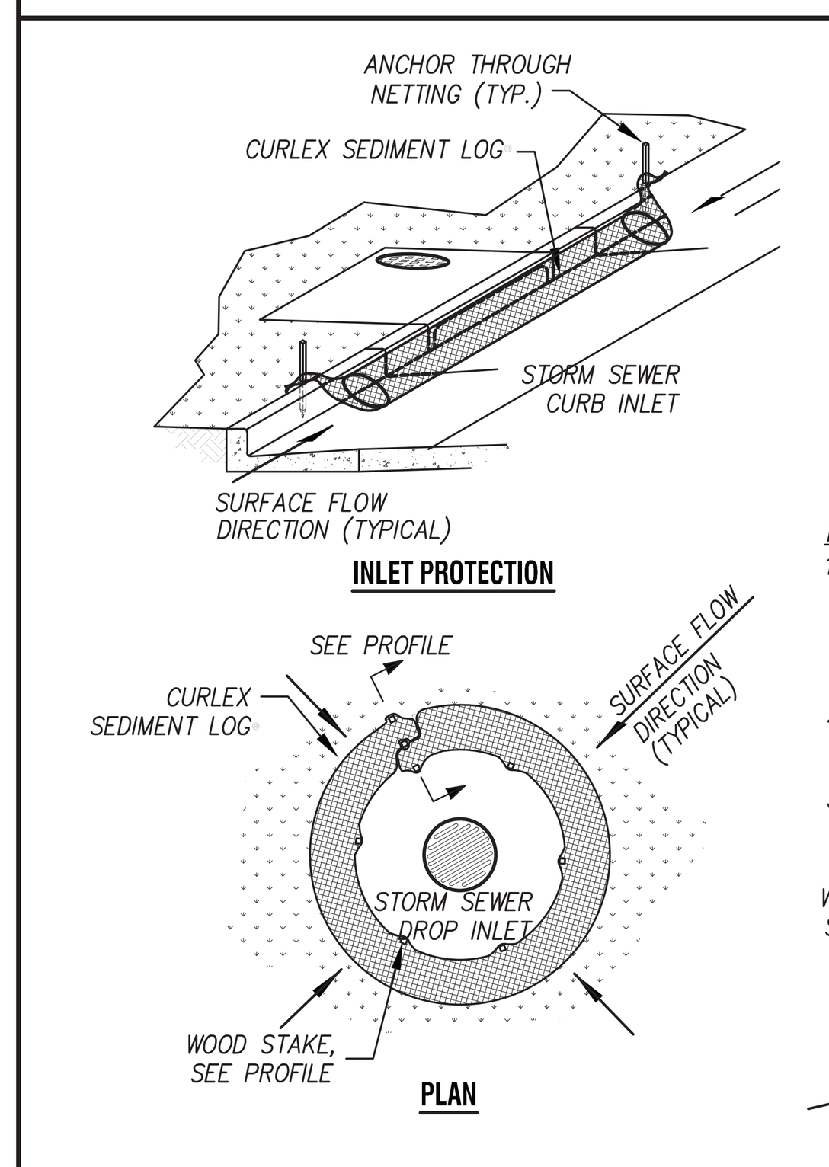


11 TEMPORARY CONSTRUCTION ENTRANCE
C4.01 N.T.S.



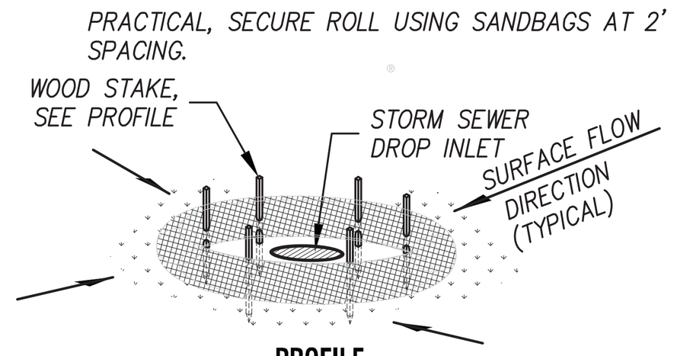
NOTES:
1. SILT FENCE SHALL BE PRE-ASSEMBLED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
2. SILT FENCE SHALL HAVE AN APPROVED BACKING OR A BUILT-IN REINFORCED STRUCTURE AS RECOMMENDED BY THE MANUFACTURER TO SUPPORT THE GEOTEXTILE FABRIC.
3. EXCLUDING PERIMETER FENCING EROSION CONTROL LOG MAY BE USED AS SUBSTITUTE.
4. FOR ADDITIONAL REQUIREMENTS SEE BMP; SILT FENCE ES-14-1.

12 TEMPORARY SILT FENCE
C4.01 N.T.S.

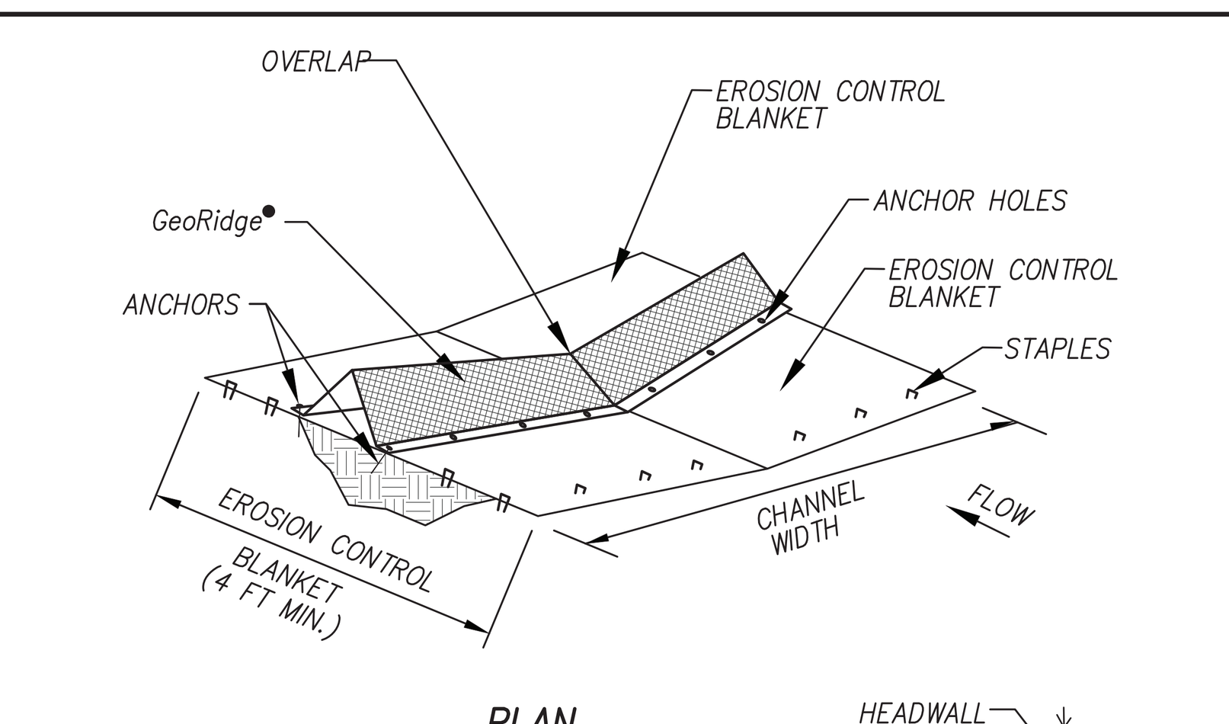


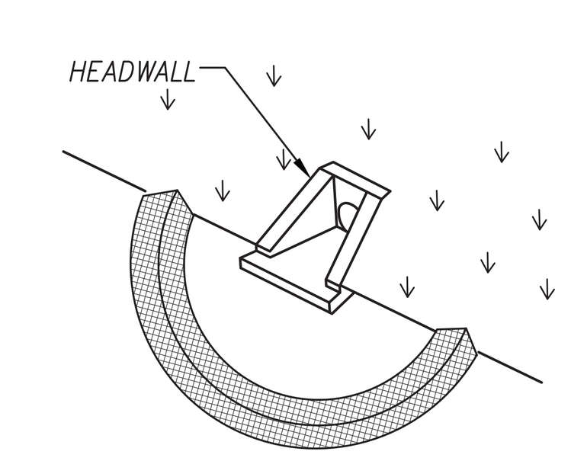
	TYPE I	TYPE II	TYPE III	TYPE IV
NORMAL DIAMETER	50 CM (20 IN)	30 CM (12 IN)	23 CM 9 IN)	15 CM (6 IN)
LENGTH	3.05 M (10 FT.)	3.05 M (10 FT.)	7.62 M (25 FT.)	7.62 M (25 FT.)
WEIGHT (±10%)	13.62 KG (30 LB)	9.08 KG (20 LB)	11.35 KG (25 LB)	5.45 KG (12 LB)
NET OPENING (HEXAGONAL-SHAPED)	2.5 CM (1 IN)	2.5 CM (1 IN)	1.9 CM (.75 IN)	1.3 CM (.5 IN)

NOTES:
1. TYPE III SEDIMENT CONTROL LOGS TO BE THE MINIMUM USED FOR ENERGY DISSIPATION IN MILD CONCENTRATED FLOW AREAS, SLOPE INTERRUPTION. CONTRACTOR TO DETERMINE IF TYPE I OR II IS APPROPRIATE PER MANUFACTURER'S RECOMMENDATION.
2. SEDIMENT CONTROL DEVICES SHALL BE CURLEX SEDIMENT LOG, AS MANUFACTURED BY AMERICAN EXCELSIOR COMPANY, OR EQUAL.
3. WHERE EROSION CONTROL IS NEEDED BUT STAKING IS NOT PRACTICAL, SECURE ROLL USING SANDBAGS AT 2' C-C SPACING.



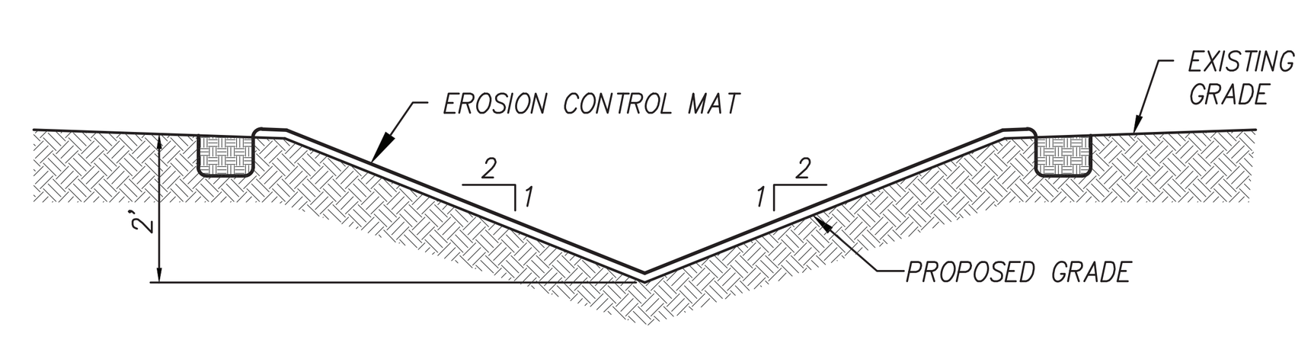
13 TEMPORARY INLET PROTECTION (TYPE II)
C4.01 N.T.S.





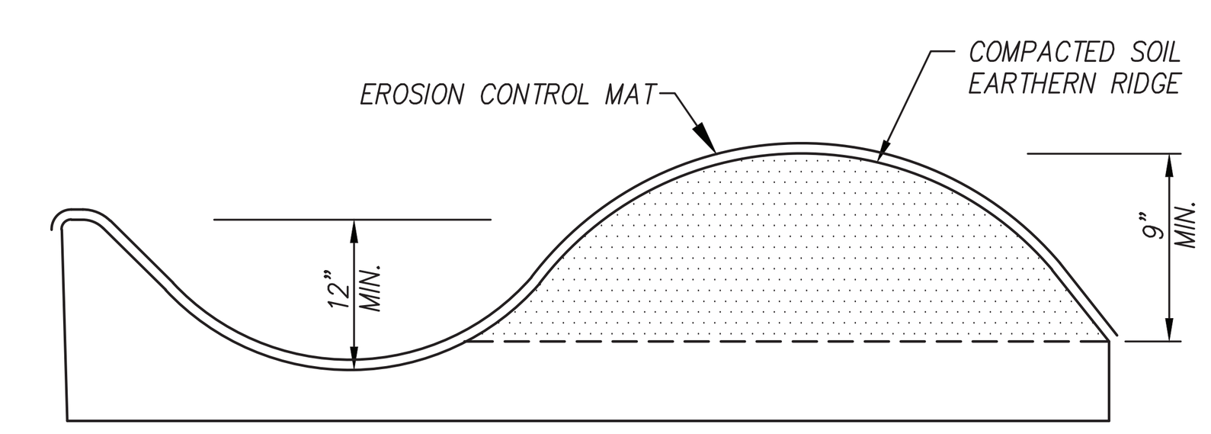
NOTES:
1. INSTALL GEORIDGE CHECK DAM PER MANUFACTURER'S RECOMMENDATIONS.
2. GEORIDGE CHECK DAM TO BE USED IN AREAS ADJACENT TO TRAVEL WAYS.

14 GeoRidge® CHECK DAMS
C4.01 N.T.S.



NOTES:
1. EROSION CONTROL MAT SHALL BE AMERICAN EXCELSIOR OR EQUAL AND INSTALLED PER THE MANUFACTURER'S SPECIFICATIONS.

15 TYPICAL DITCH SECTION
C3.02 N.T.S.



16 DIVERSION BERM
C4.01 N.T.S.

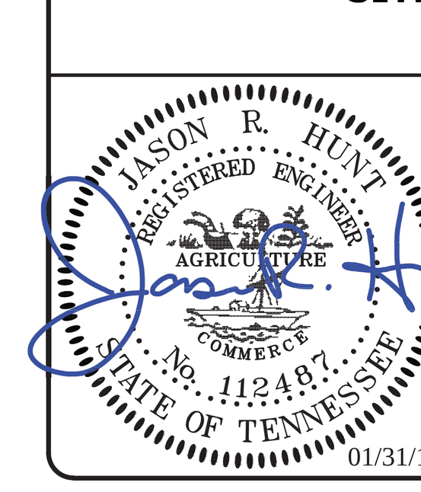
REVISIONS	DATE
1 REVISED PER CITY OF KNOXVILLE COMMENTS	12/12/2018
2 REVISED PER CITY OF KNOXVILLE COMMENTS	1/07/2019
3 REVISED PER CITY OF KNOXVILLE COMMENTS	1/31/2019

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555
WWW.CANNON-CANNON.COM
8550 Kingston Pike
Knoxville, TN 37919

CLIENT: KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION
901 N. BROADWAY ST.
KNOXVILLE, TENNESSEE 37917

PROJECT: CLIFTON ROAD DEVELOPMENT
404 CLIFTON ROAD
KNOXVILLE, TENNESSEE

SITE DETAILS



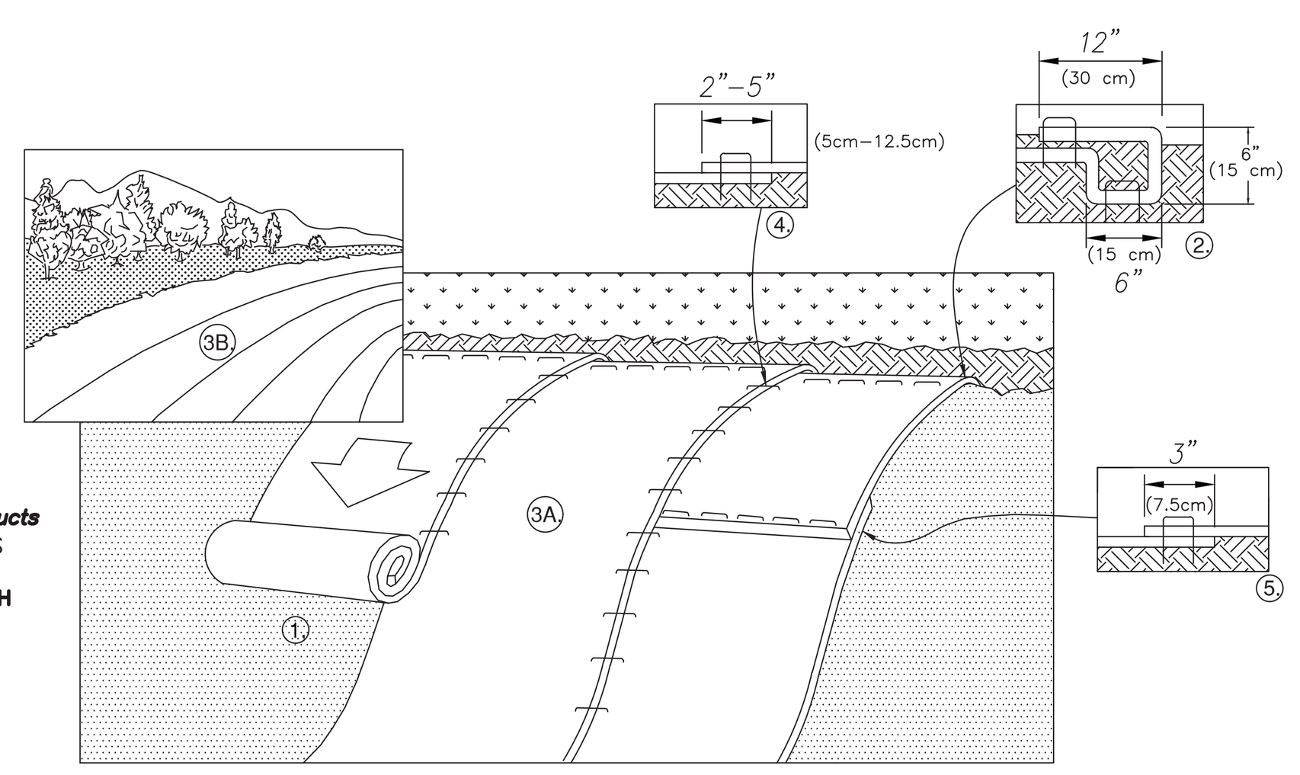
CCI PROJECT NO.	00216-0005
DRAWING DATE	NOVEMBER 19, 2018
PM JRH	QC AWG
DRAWN LED	

C5.01

SLOPE INSTALLATION NOTES

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL–O–SEED DO NOT SEED PREPARED AREA. CELL–O–SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP–SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES TM IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM , STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" – 5" (5 CM – 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH. NOTE: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

NORTH AMERICAN GREEN
EROSION CONTROL *Products* *Guaranteed* SOLUTIONS
14649 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
800–772–2040
www.nagreen.com



SLOPE INSTALLATION

MATERIAL SPECIFICATIONS

THE COMPOSITE TURF REINFORCEMENT MAT (C–TRM) SHALL BE A MACHINE PRODUCED MAT OF 70% STRAW/30% COCONUT FIBER MATRIX INCORPORATED INTO A PERMANENT THREE–DIMENSIONAL NETTING STRUCTURE.

THE MATRIX SHALL BE EVENLY DISTRIBUTED ACROSS THE ENTIRE WIDTH OF THE MATTING AND STITCH BONDED BETWEEN UV STABILIZED TOP AND BOTTOM NETS WITH 0.50 X 0.50 INCH (1.27 X 1.27 CM) OPENINGS AND A SUPER HEAVY DUTY UV STABILIZED, DRAMATICALLY CORRUGATED (CRIMPED) INTERMEDIATE NETTING WITH 0.50 X 0.50 INCH (1.27 X 1.27 CM) OPENINGS. THE MIDDLE CORRUGATED NETTING SHALL FORM PROMINENT CLOSELY SPACED RIDGES ACROSS THE ENTIRE WIDTH OF THE MAT. THE THREE NETTINGS SHALL BE STITCHED TOGETHER ON 1.50 INCH (3.81 CM) CENTERS WITH UV STABILIZED POLYPROPYLENE THREAD TO FORM A PERMANENT THREE–DIMENSIONAL STRUCTURE.

ALL MATS SHALL BE MANUFACTURED WITH A COLORED THREAD STITCHED ALONG BOTH OUTER EDGES (APPROXIMATELY 2–5 INCHES [5–12.5 CM] FROM THE EDGE) AS AN OVERLAP GUIDE FOR ADJACENT MATS.

THE COMPOSITE TURF REINFORCEMENT MAT SHALL BE THE NORTH AMERICAN GREEN SC250, OR EQUIVALENT. THE SC250 PERMANENT COMPOSITE TURF REINFORCEMENT MAT SHALL HAVE THE FOLLOWING PHYSICAL PROPERTIES:

MATERIAL CONTENT

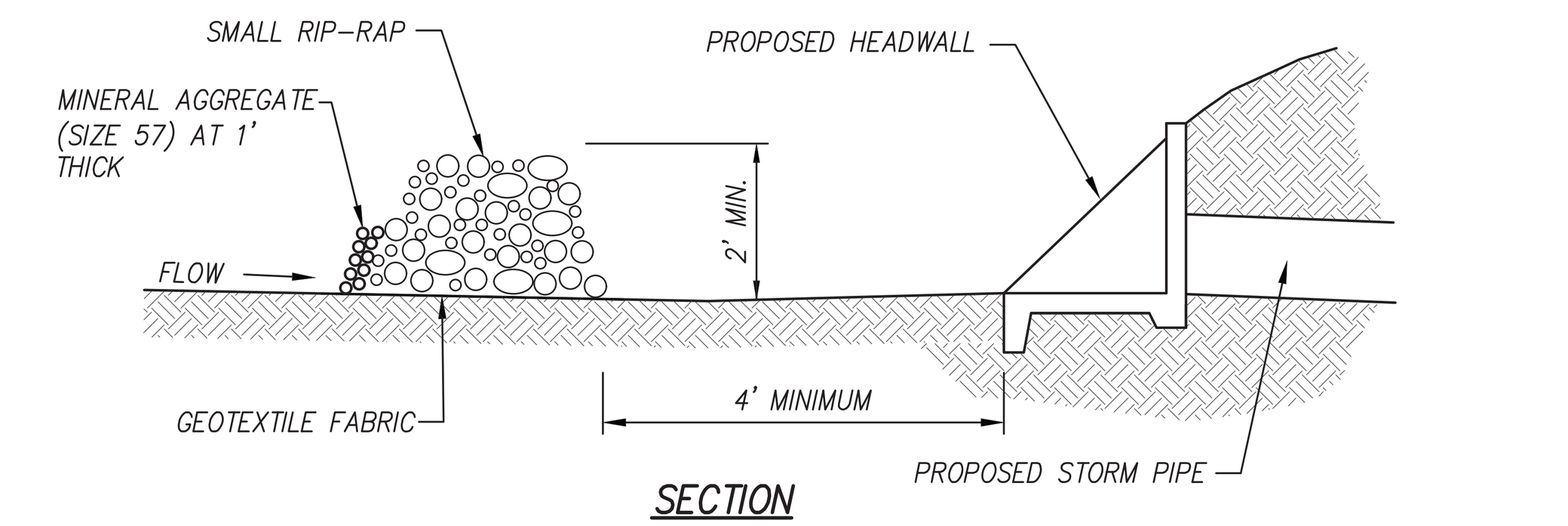
MATRIX 70% STRAW FIBER
(0.35 LB/YD2) (0.19 KG/M2)
30% COCONUT FIBER
(0.15 LB/YD2) (0.08 KG/M2)

NETTING
TOP AND BOTTOM UV STABILIZED POLYPROPYLENE
(5.0 LBS/1,000 FT2 [2.44 KG/100 M2] APPROXIMATE WEIGHT)
MID –SUPER HEAVY UV STABILIZED POLYPROPYLENE CORRUGATED
(24 LB/1,000 FT2 [11.7 KG/100 M2] APPROXIMATE WEIGHT)
THREAD BLACK UV STABILIZED POLYPROPYLENE

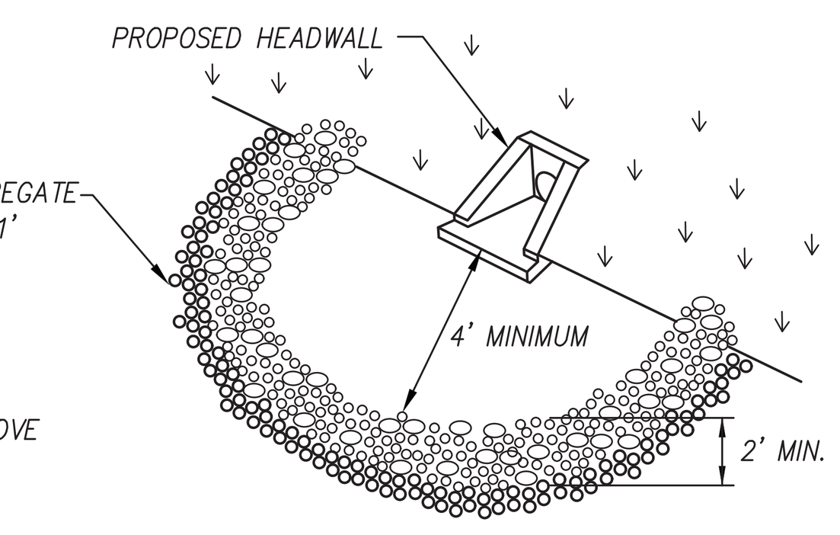
PHYSICAL SPECIFICATIONS (PER ROLL)

	ENGLISH	METRIC
WIDTH	6.50 FT	2.00 M
LENGTH	55.50 FT	16.90 M
WEIGHT	34.00 LBS ± 10%	15.42 KG
AREA	40.00 YD2	33.40 M2
STITCH SPACING	1.50 IN	3.81 CM

17 / C4.03 EROSION CONTROL BLANKET
N.T.S.



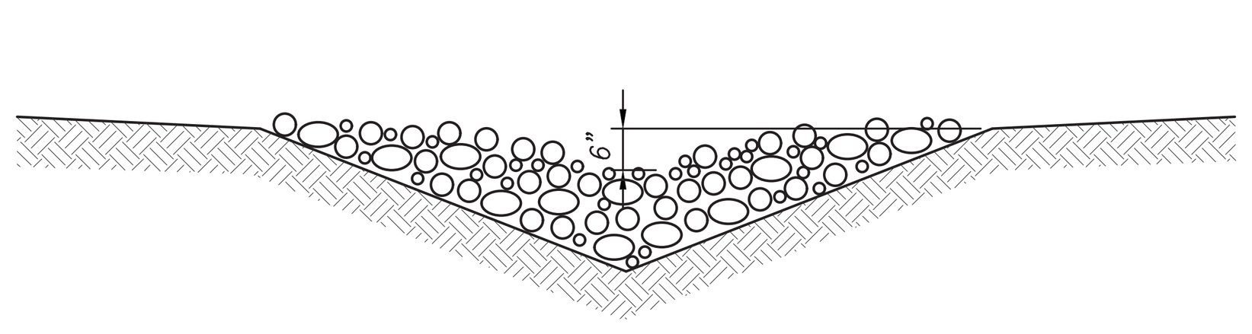
SECTION



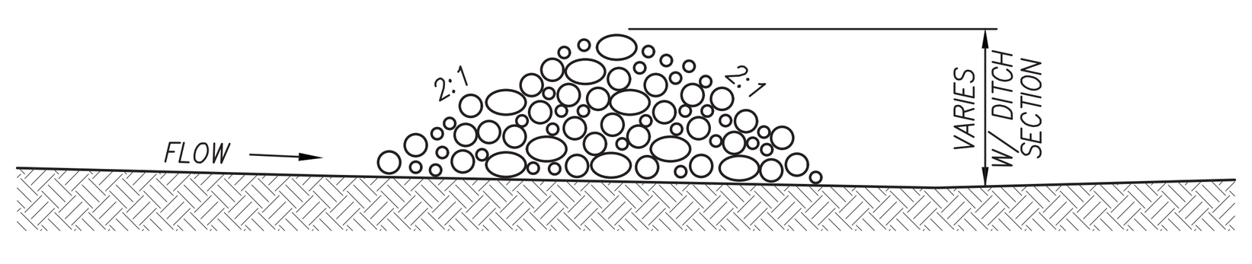
PERSPECTIVE VIEW

NOTES:
1. STONE SHALL BE 2"–3".
2. CONSTRUCT, MAINTAIN, AND REMOVE IN ACCORDANCE WITH THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK.
3. ENHANCED INCLUDES THE ADDITION OF SIZE 57 STONE AND GEOTEXTILE FABRIC ON UPSTREAM SIDE OF CHECK DAM AS SHOWN ABOVE.

18 / C4.01 ENHANCED STONE FILTER RING
N.T.S.



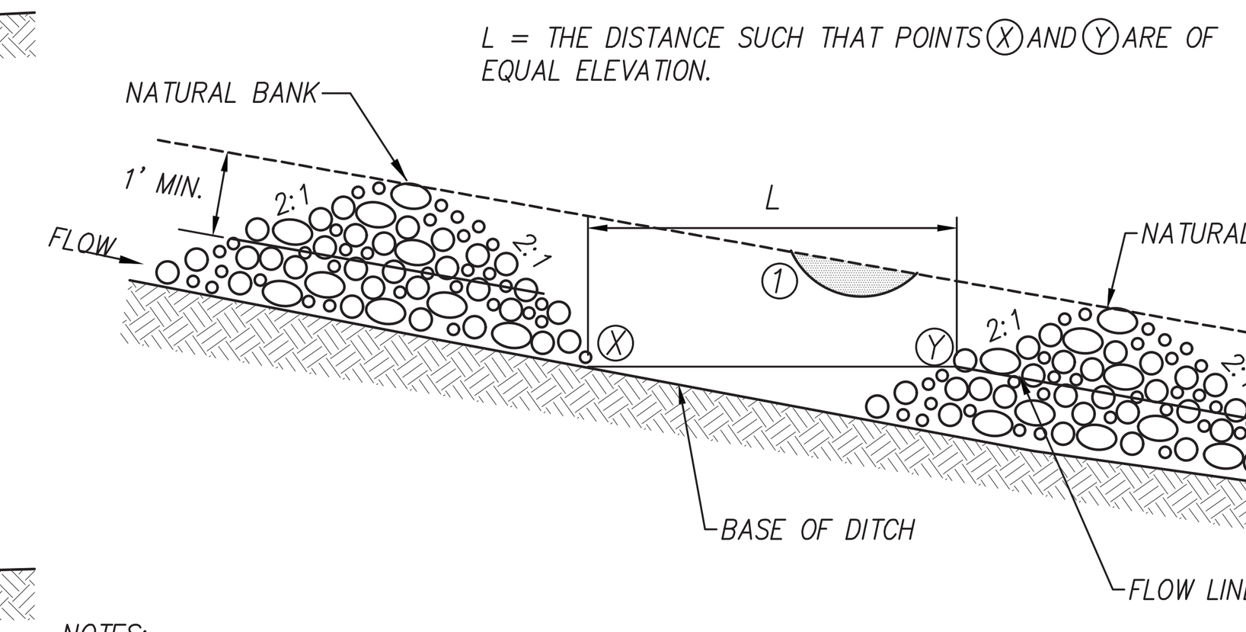
FRONT



SECTION

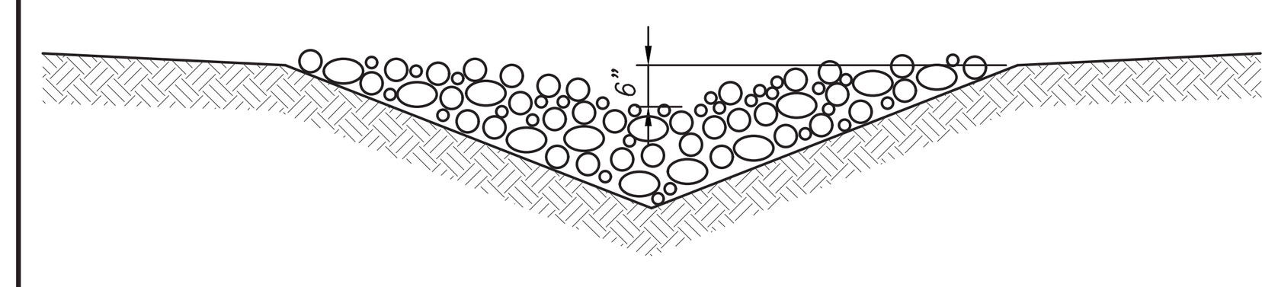
NOTES:
1. STONE SHALL BE 2"–3".
2. CONSTRUCT, MAINTAIN, AND REMOVE IN ACCORDANCE WITH THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK.

L = THE DISTANCE SUCH THAT POINTS (X) AND (Y) ARE OF EQUAL ELEVATION.



NOTES:
(1) FILL LOW AREAS ALONG TOP OF BANK THAT WOULD ALLOW BACKWATER TO EXIT DITCH.

19 / C4.01 TEMPORARY ROCK CHECK DAM
N.T.S.



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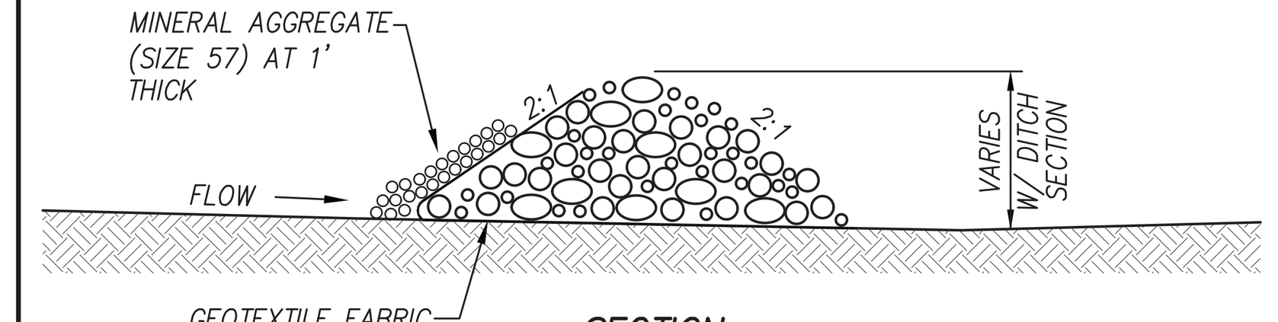
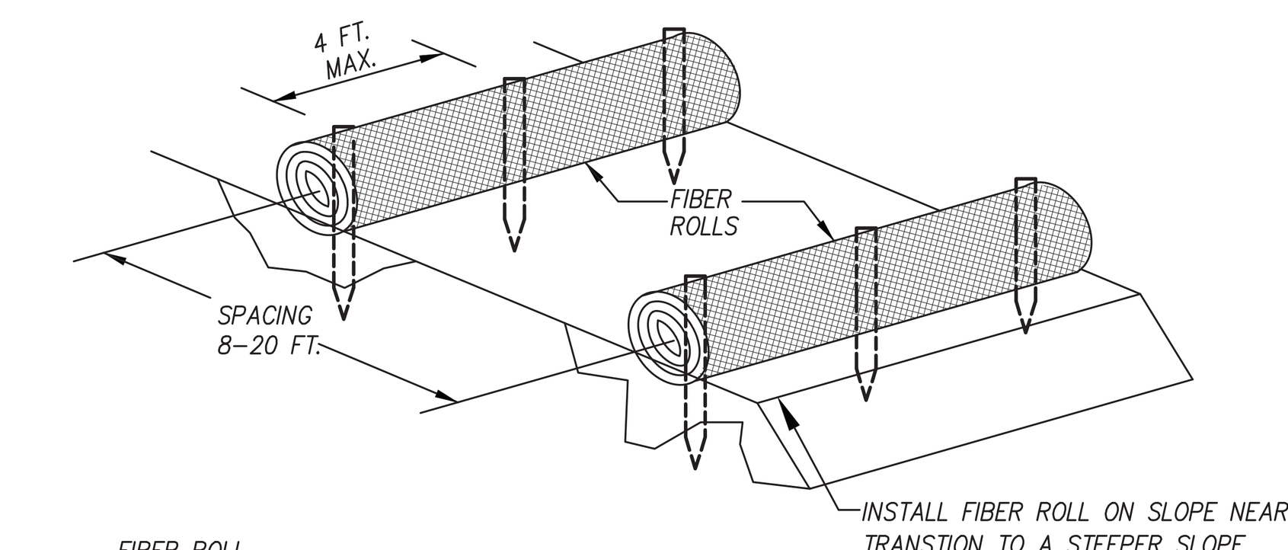
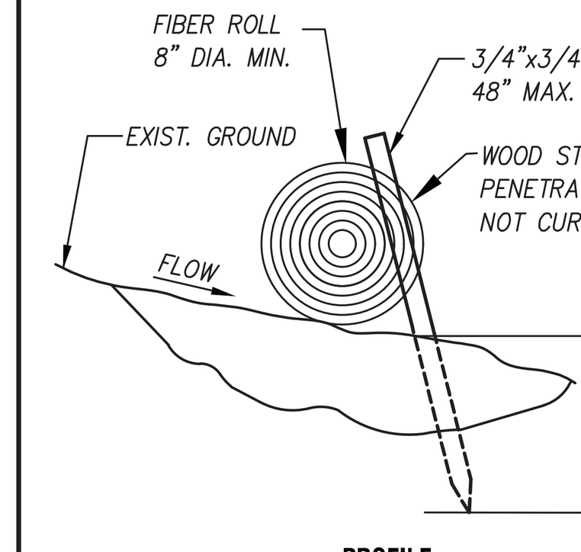


SECTION

NOTES:
1. STONE SHALL BE 2"–3".
2. CONSTRUCT, MAINTAIN, AND REMOVE IN ACCORDANCE WITH THE TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK.
3. ENHANCED INCLUDES THE ADDITION OF SIZE 57 STONE AND GEOTEXTILE FABRIC ON UPSTREAM SIDE OF CHECK DAM AS SHOWN ABOVE.

20 / C4.01 TEMPORARY ENHANCED ROCK CHECK DAM
N.T.S.



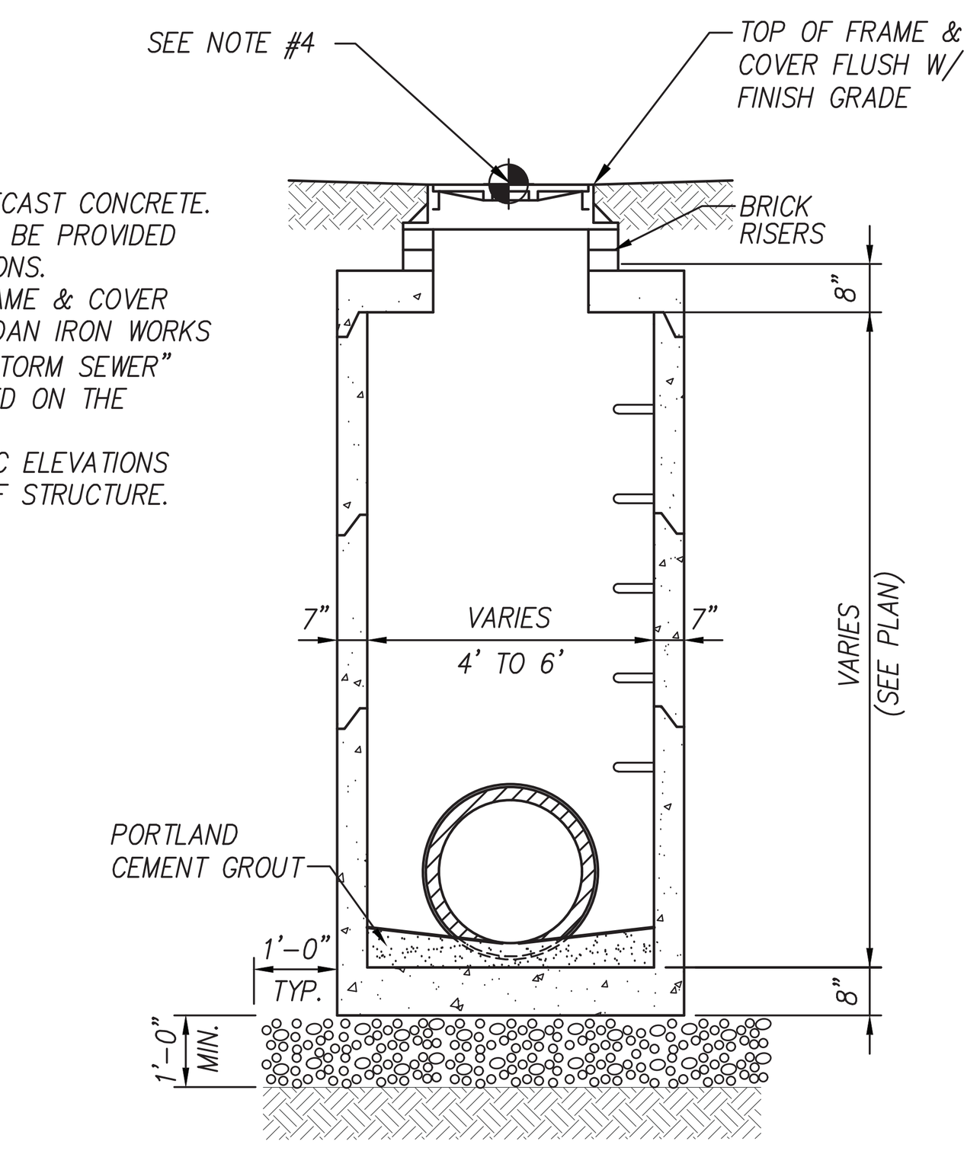


PROFILE

NOTES:
1. TYPE III SEDIMENT CONTROL LOGS TO BE THE MINIMUM USED FOR ENERGY DISSIPATION IN MILD CONCENTRATED FLOW AREAS, SLOPE INTERRUPTION. CONTRACTOR TO DETERMINE IF TYPE I OR II IS APPROPRIATE PER MANUFACTURER'S RECOMMENDATION.
2. SEDIMENT CONTROL DEVICES SHALL BE CURLEX SEDIMENT LOG, AS MANUFACTURED BY AMERICAN EXCELSIOR COMPANY, OR EQUAL.
3. WHERE EROSION CONTROL IS NEEDED BUT STAKING IS NOT PRACTICAL, SECURE ROLL USING SANDBAGS AT 2' C–C SPACING.

21 / C4.01 SEDIMENT CONTROL LOGS
N.T.S.

NOTES:
1. MANHOLE TO BE PRECAST CONCRETE.
2. LADDER BARS SHALL BE PROVIDED PER OSHA REGULATIONS.
3. STORM MANHOLE FRAME & COVER SHALL BE EAST JORDAN IRON WORKS #1045 OR EQUAL. "STORM SEWER" SHALL BE DESIGNATED ON THE MANHOLE COVER.
4. COORDINATES AND TC ELEVATIONS TAKEN AT CENTER OF STRUCTURE.



23 / C3.02 STORM SEWER MANHOLE
N.T.S.

STORM DRAINAGE STRUCTURES

NO.	DESCRIPTION	LOCATION	TOP OF CASTING	INVERT EL. (IN)	INVERT EL. (OUT)
1 EHW	ENERGY DISSIPATING HEADWALL SEE DETAIL #25/SHEET C5.02	N 602692.10 E 2568244.20		930.60(2)	
2 SMH	STORM MANHOLE SEE DETAIL #23/SHEET C5.02	N 602597.81 E 2568227.49	935.00	931.18(3)	931.08
3 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 602583.90 E 2568125.80			931.69
4 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 602172.83 E 2568162.93		938.00(5)	
5 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 602137.39 E 2568171.98			938.18
6 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 602019.52 E 2568184.42		946.00(7)	
7 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 601989.22 E 2568191.86			946.32
8 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 601907.12 E 2568200.11		949.32(9)	
9 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 601839.94 E 2568212.49			949.75
10 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 601731.63 E 2568223.63		956.04(11)	
11 AD	AREA DRAIN SEE DETAIL #10/SHEET C5.01	N 601685.63 E 2568229.89	959.00		956.50
12 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 601655.25 E 2568233.66		960.51(13)	
13 AD	AREA DRAIN SEE DETAIL #10/SHEET C5.01	N 601594.70 E 2568241.76	965.00		961.12

STORM DRAINAGE STRUCTURES

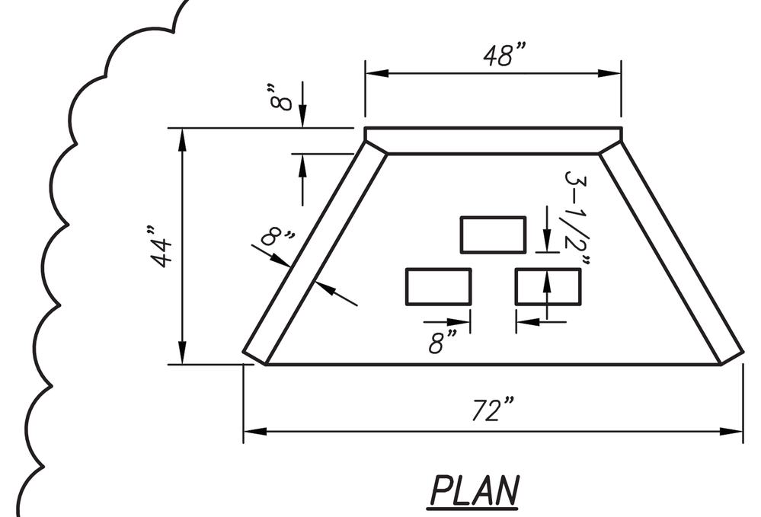
NO.	DESCRIPTION	LOCATION	TOP OF CASTING	INVERT EL. (IN)	INVERT EL. (OUT)
14 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 601490.67 E 2568255.94		974.91(15)	
15 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 601449.55 E 2568270.25			976.00
16 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 601287.54 E 2568285.33		995.58(17)	
17 AD	AREA DRAIN SEE DETAIL #10/SHEET C5.01	N 601234.27 E 2568293.38	1000.00		996.12
18 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 601117.96 E 2568312.14		1004.51(19)	
19 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 601070.09 E 2568321.41			1005.00
20 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 600918.67 E 2568338.25		1019.54(21)	
21 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 600874.45 E 2568351.19			1020.00
22 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 600736.03 E 2568412.16		1043.72(23)	
23 AD	AREA DRAIN SEE DETAIL #10/SHEET C5.01	N 600709.62 E 2568442.38	1048.00		1044.12
24 EW	MITERED CULVERT END SEE DETAIL #9/SHEET C5.01	N 600642.89 E 2568518.79		1057.69(25)	
25 AD	AREA DRAIN SEE DETAIL #10/SHEET C5.01	N 600613.40 E 2568550.60	1062.00		1058.12

STORM PIPE TABLE

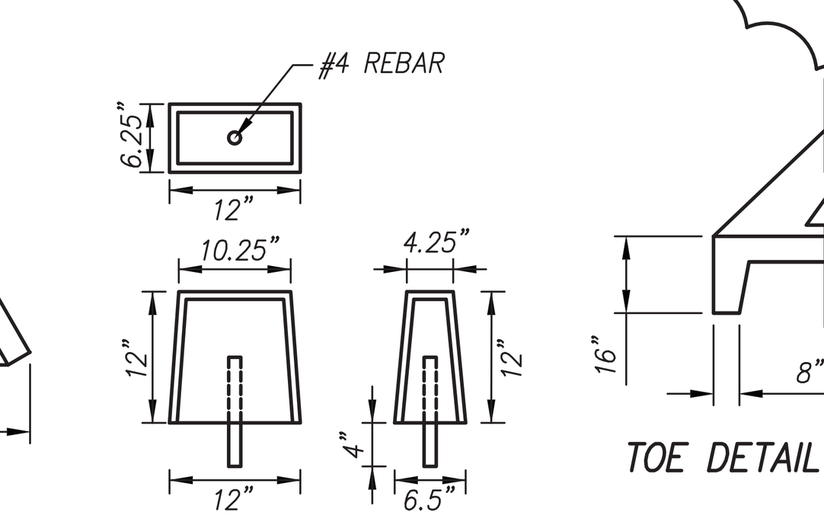
FROM	TO	DIAMETER	LENGTH (LF)	SLOPE (%)
2	1	24"RCP	96	0.50%
3	2	24"RCP	103	0.50%
5	4	18"RCP	37	0.49%
7	6	18"RCP	31	1.03%
9	8	18"RCP	68	0.63%
11	10	18"RCP	46	1.00%
13	12	18"RCP	61	1.00%
15	14	18"RCP	44	2.50%
17	16	15"RCP	54	1.00%
19	18	15"RCP	49	1.00%
21	20	15"RCP	46	1.00%
23	22	15"RCP	40	1.00%
25	24	15"RCP	43	1.00%

STORM PIPE NOTES:
1. INSTALL STORM SEWER PIPING AND APPURTENANCES TO MEET THE MATERIALS, EQUIPMENT, AND CONSTRUCTION REQUIREMENTS OF TDOT AND THE CITY OF KNOXVILLE STANDARD SPECIFICATIONS.
2. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
3. STORM SEWER PIPE SHALL BE REINFORCED CONCRETE PIPE IN ACCORDANCE WITH AASHTO M170 OR EQUAL, OR SMOOTH INTERIOR HIGH DENSITY POLYETHYLENE PIPE IN ACCORDANCE WITH AASHTO M294 OR EQUAL UNLESS NOTED OTHERWISE. REFER TO THE STORM PIPE TABLE.
4. PVC STORM PIPE SHALL BE SCHEDULE 40 DWV PVC PIPE, ASTM D1785. INSTALL PER ASTM D2321. FITTINGS: SCHEDULE 40 DWV PVC, SOCKET TYPE FITTINGS, ASTM D2665. JOINTS: SOLVENT JOINTS FOR PVC, ASTM D2564.
5. PIPE DEFLECTION AND ALIGNMENT SHALL BE CHECKED AFTER BACKFILLING & COMPACTION ARE COMPLETE & PRIOR TO PLACING THE BASE. TEST DEFLECTION WITH A MANDREL OR OTHER APPROVED METHOD.
6. PIPE WITH DEFLECTION 5% OR GREATER OR WITH UNDUE MISALIGNMENT SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
7. STORM PIPE LENGTHS LOCATED IN STORM PIPE TABLE REPRESENT CENTER OF STRUCTURE TO CENTER OF STRUCTURE (COORDINATE TO COORDINATE). CONTRACTOR TO ADJUST LENGTHS AS NEEDED BASED ON SIZE OF STRUCTURE.

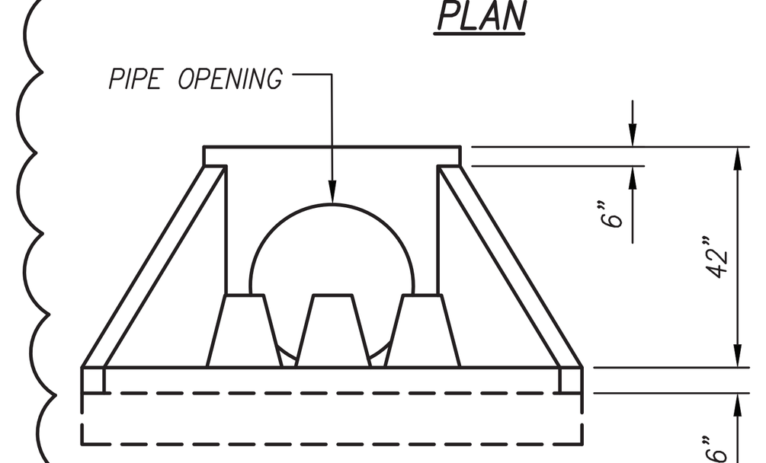
22 / C3.02 STORM TABLES AND NOTES
N.T.S.



PLAN



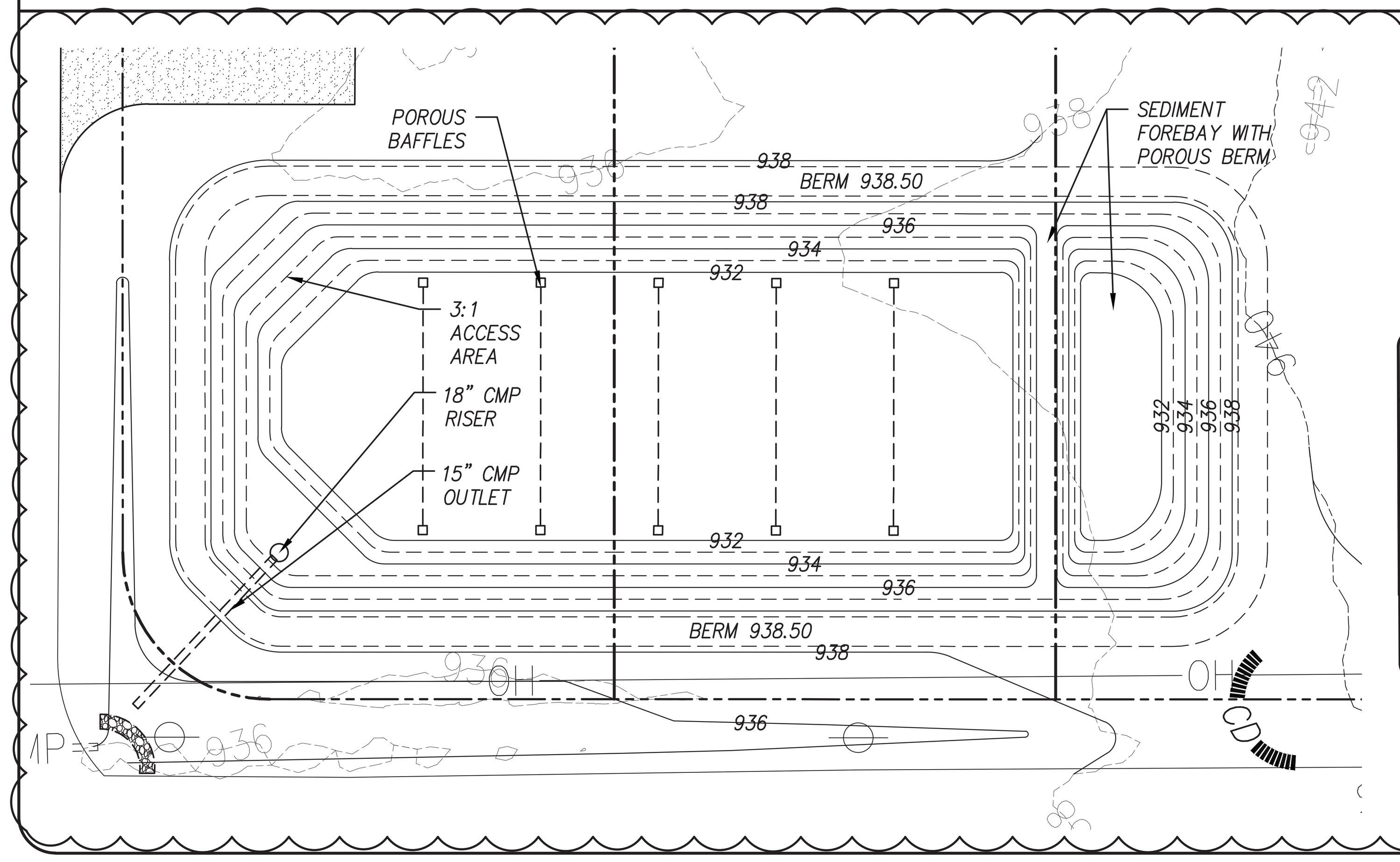
ENERGY DISSIPATER DETAIL



ELEVATION

NOTES:
1. MINIMUM 1–1/2" CONCRETE COVER ON REBAR.
2. CONCRETE: CLASS A – 5,000 PSI @ 28 DAYS W/AIR ENTRAINMENT.
3. ALL PICK UP POINTS AND PIPE OPENINGS TO BE GROUTED BY CONTRACTOR WITH NON–SHRINK GROUT.
4. 3/4" CHAMFER ON ALL EXPOSED EDGES.

25 / C3.02 ENERGY DISSIPATING HEADWALL
N.T.S.



SEDIMENT BASIN CALCULATION
DRAINAGE AREA = 7.7 AC.

CLEANOUT POINT = 7.7 AC X 904.5 CF/AC = 6,965 CF
SET AT ELEVATION 933.15
WET STORAGE = 7.7 AC X 1,809 CF/AC = 13,929 CF
SET AT ELEVATION 934.25
DRY STORAGE = 7.7 AC X 1,809 CF/AC = 13,929 CF
TOTAL STORAGE = DRY + STORAGE
13,929 CF + 13,929 CF = 27,859 CF
SET AT ELEVATION 936.00

SEDIMENT FOREBAY DATA TABLE

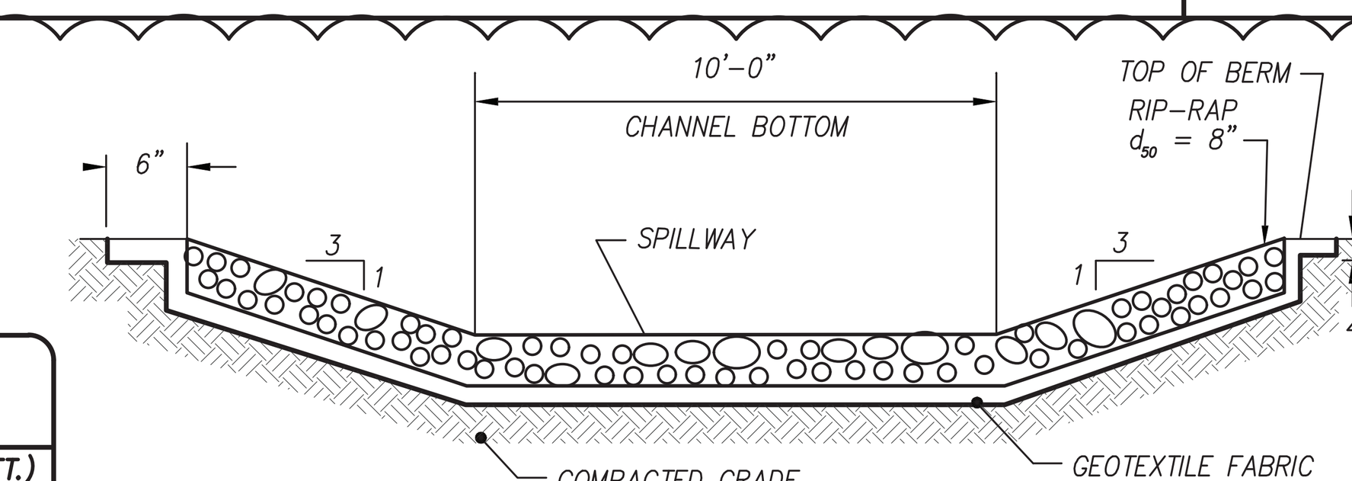
ELEVATION	AREA (SQ. FT.)	DEPTH (FT.)	VOLUME (CU. FT.)
932	581	0	0
933	784	1	682
934	1,012	2	1,580
935	1,263	3	2,718
936	1,539	4	4,119
TOTAL AVAILABLE SEDIMENT FOREBAY VOLUME = 4,119 CU–FT			

NOTES:
1. CONSTRUCT SEDIMENT POND IN ACCORDANCE WITH THE TDEC EROSION CONTROL HANDBOOK.
2. SEE DETAIL THIS SHEET FOR THE OUTLET STRUCTURE AND SKIMMER DEVICE.

SEDIMENT BASIN DATA TABLE

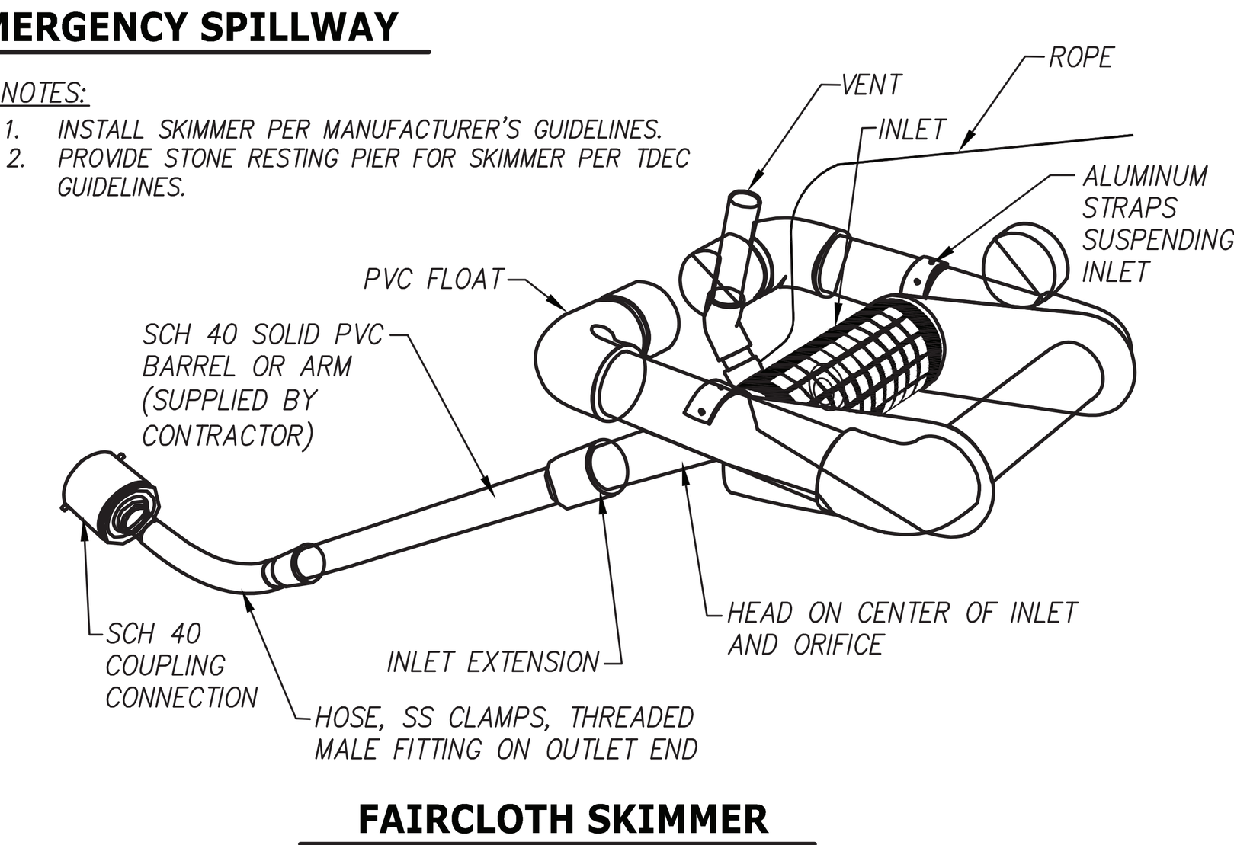
ELEVATION	AREA (SQ. FT.)	DEPTH (FT.)	VOLUME (CU. FT.)
932	5,995	0	0
933	6,827	1	6,411
934	7,706	2	13,678
935	8,823	3	21,942
936	9,812	4	31,260
937	10,948	5	41,640
938	11,898	6	53,063
938.5	12,431	6.5	59,145
TOTAL AVAILABLE SEDIMENT BASIN VOLUME = 59,145 CU–FT			

24 / C3.02 SEDIMENT BASIN
N.T.S.



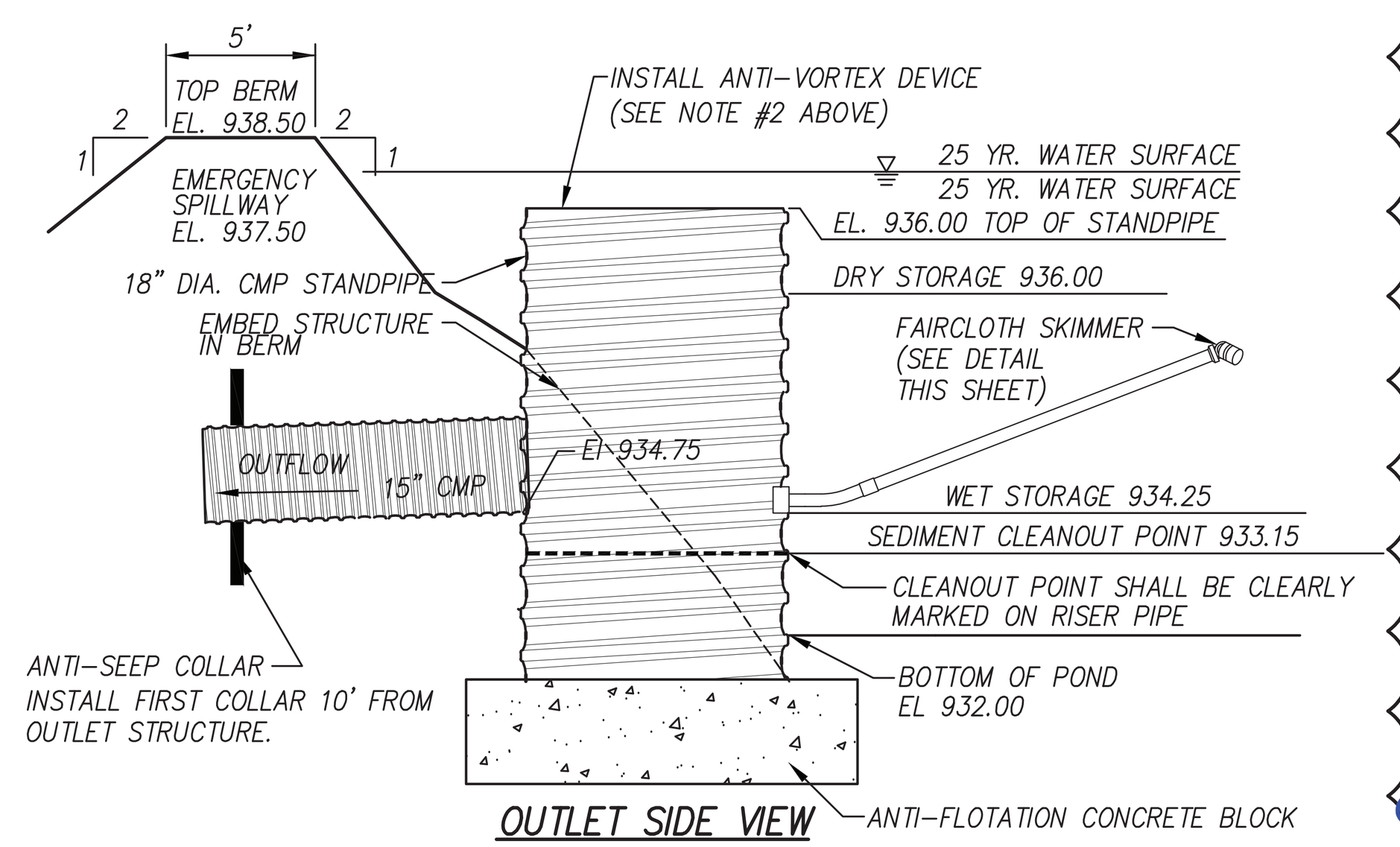
EMERGENCY SPILLWAY

NOTES:
1. INSTALL SKIMMER PER MANUFACTURER'S GUIDELINES.
2. PROVIDE STONE RESTING PIER FOR SKIMMER PER TDEC GUIDELINES.



FAIRCLOTH SKIMMER
2.5" SKIMMER WITH 1.1" RADIUS

NOTES:
1. TEMPORARY OUTLET CONTROL STRUCTURE SHALL BE CORRUGATED METAL PIPE.
2. TOP OF RISER PIPE SHALL HAVE AN ANTI–VORTEX DEVICE. REFER TO TDEC EROSION AND SEDIMENT CONTROL HANDBOOK FOR DETAILS.
3. COORDINATES AND TC ELEV. TAKEN ALONG ℄ OF STRUCTURE.



OUTLET SIDE VIEW

OUTLET STRUCTURE

REVISIONS	DATE
(1) REVISED PER CITY OF KNOXVILLE COMMENTS	12/12/2018
(2) REVISED PER CITY OF KNOXVILLE COMMENTS	1/07/2019

CANNON & CANNON INC
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CLIENT:
KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION
901 N. BROADWAY ST.
KNOXVILLE, TENNESSEE 37917

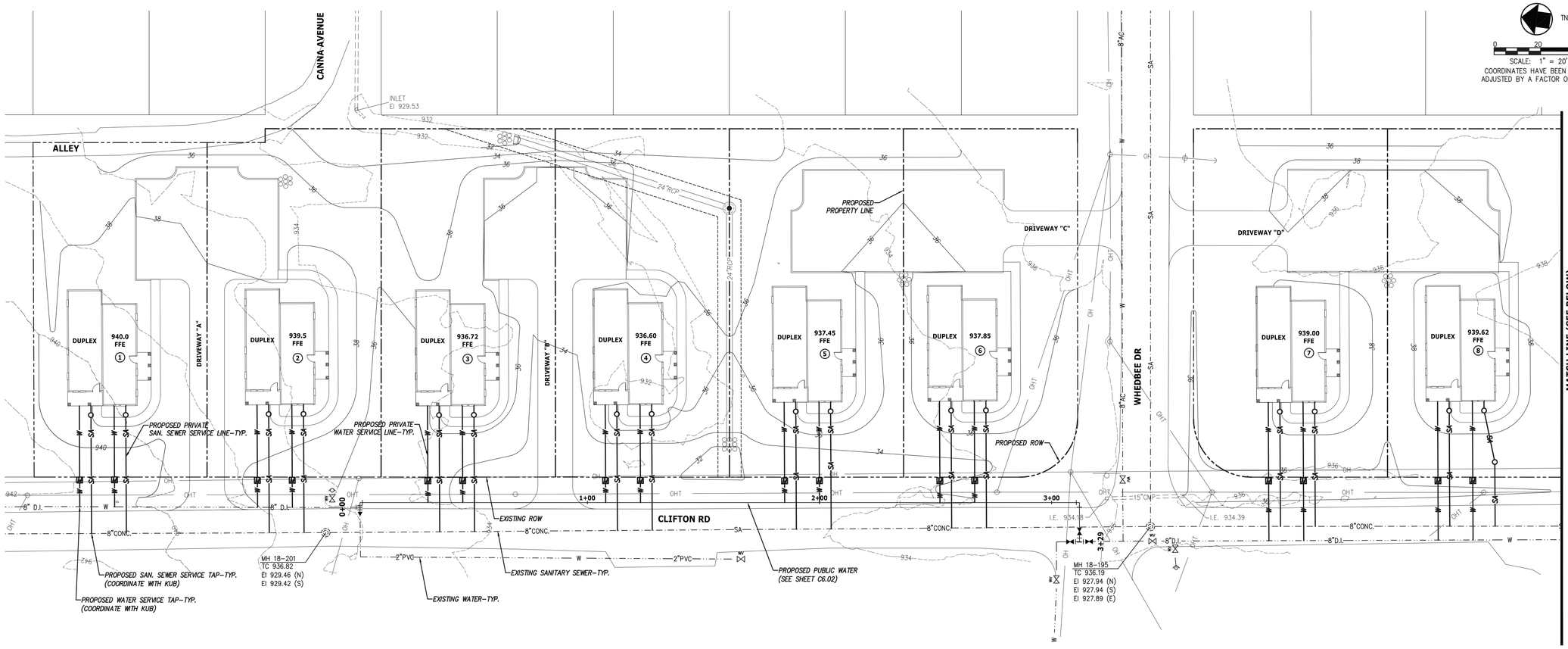
PROJECT:
CLIFTON ROAD DEVELOPMENT
404 CLIFTON ROAD
KNOXVILLE, TENNESSEE

SITE DETAILS

JASON R. HUNT
REGISTERED ENGINEER
AGRICULTURE COMMERCE
No. 112487
STATE OF TENNESSEE
01/07/19

CCI PROJECT NO.	00216-0005
DRAWING DATE	NOVEMBER 19, 2018
PM JRH	QC AWG
DRAWN LED	

C5.02

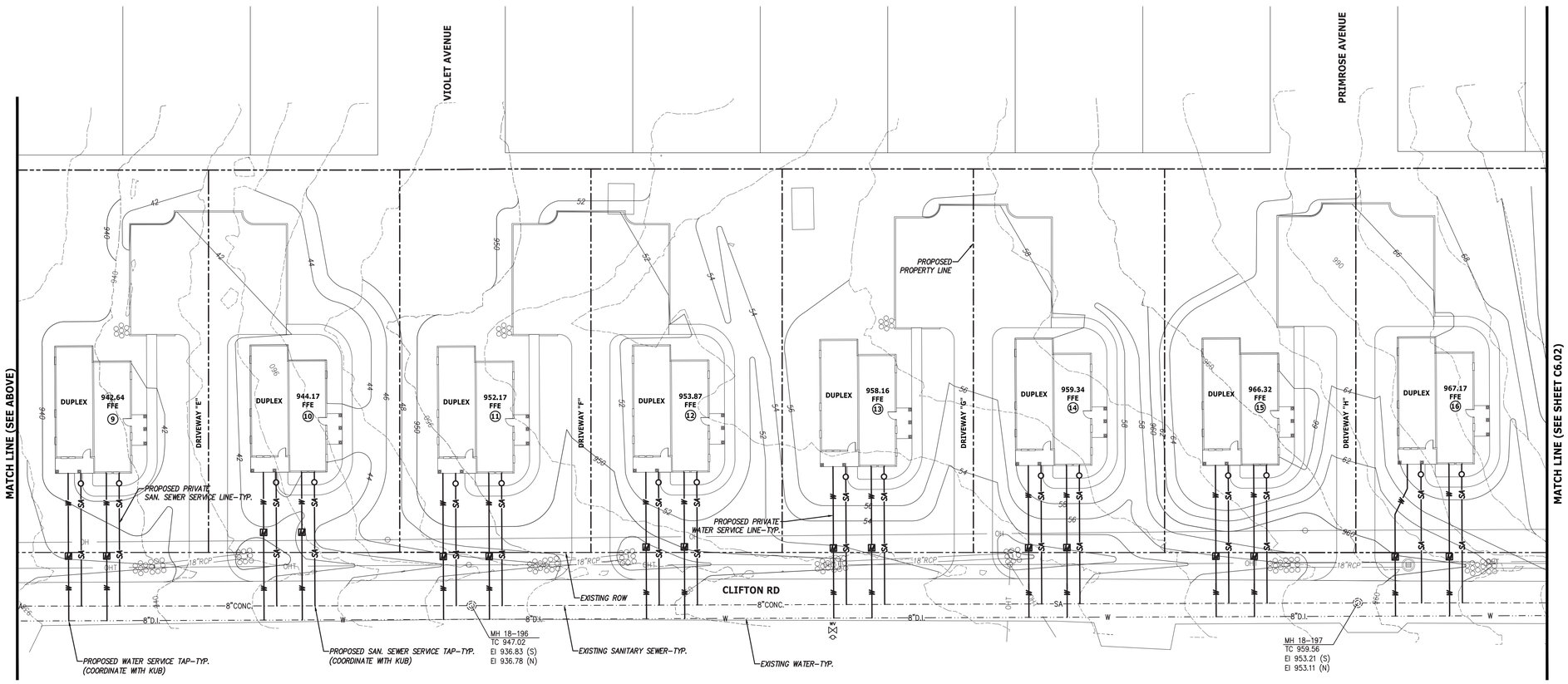


TN STATE PLANE (NAD 83)

0 20 40

SCALE: 1" = 20'

COORDINATES HAVE BEEN DATUM ADJUSTED BY A FACTOR OF 1.0001



TN STATE PLANE (NAD 83)

0 20 40

SCALE: 1" = 20'

COORDINATES HAVE BEEN DATUM ADJUSTED BY A FACTOR OF 1.0001

GENERAL NOTES:

1. THE BOUNDARY AND TOPOGRAPHIC DATA SHOWN WAS PROVIDED BY CANNON AND CANNON, INC. DATED AUGUST 17, 2018.

WATER NOTES:

1. THE STONE BEDDING AND BACKFILL SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS.
2. WATER LINES SHALL BE INSTALLED AFTER GRADING IS COMPLETED AND APPROVED AND BEFORE ANY PAVEMENT BASE IS APPLIED.
3. ALL WATER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH KNOXVILLE UTILITIES BOARD OF KNOX COUNTY, TENNESSEE "STANDARD SPECIFICATIONS FOR WATER SYSTEM CONSTRUCTION".
4. CONTRACTOR TO INSTALL WATER LINES AT A POSITIVE GRADE BETWEEN DESIGNATED HIGH AND LOW POINTS TO PREVENT TRAPPING OF AIR.
5. **CONTRACTOR TO USE FITTINGS WITH REACTION BLOCKING AS REQUIRED FOR PROPER HORIZONTAL AND VERTICAL ALIGNMENT.**
6. **NO VALVES SHALL BE INSTALLED UNDER AREAS TO RECEIVE ASPHALT PAVEMENT UNLESS APPROVED BY KNOXVILLE UTILITIES BOARD.**
7. **1" AIR RELEASE VALVES SHALL BE INSTALLED AT HIGH POINTS IN THE PROPOSED WATER LINE, AND LOCATIONS THEREOF SHALL BE FIELD VERIFIED BY KNOXVILLE UTILITIES BOARD.**
8. CONTRACTOR TO COORDINATE FIELD LOCATIONS OF PROPOSED WATER SERVICES AND METERS WITH KNOXVILLE UTILITIES BOARD.
9. ALL TAPPING TEES AND VALVES SHALL BE INSPECTED BY KNOXVILLE UTILITIES BOARD.
10. CONTRACTOR SHALL INSTALL SERVICE TAP TO MAIN, SERVICE LINE TO METER, METER BOX, AND METER YOKE. K.U.B. SHALL INSTALL METER BOX AND YOKE.

SEWER NOTES:

1. PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD THE EXISTING UTILITIES FROM DAMAGE DURING THE CONSTRUCTION OF THIS PROJECT. FURNISH ANY SPECIAL EQUIPMENT REQUIRED TO WORK OVER AND AROUND THE UTILITIES.
2. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS TO NOTIFY THEM OF WORK IN THE AREA AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY. NOTIFICATION SHALL BE GIVEN AT LEAST THREE BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
3. TRENCH DESIGN AND SAFETY FOR UTILITY CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE AND OSHA REGULATIONS.
4. A MINIMUM BEDDING LAYER OF 6 INCHES OF TYPE 57 STONE WILL BE INSTALLED AROUND THE CIRCUMFERENCE OF ALL PIPE AND FITTINGS OUTSIDE THE LIMITS OF THE PAVED SURFACE. STONE BACKFILL TO GRADE REQUIRED UNDER PROPOSED PAVED SURFACES.
5. SANITARY SEWER SHALL BE INSTALLED AFTER GRADING IS COMPLETED AND APPROVED AND BEFORE ANY PAVEMENT BASE IS APPLIED.
6. ALL SANITARY SEWER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE KNOXVILLE UTILITIES BOARD OF KNOX COUNTY, TENNESSEE "STANDARD SPECIFICATIONS FOR WASTEWATER CONSTRUCTION".
7. SANITARY SEWER PIPE SHALL BE SDR35 PVC FOR DEPTHS TO 12 FT. AND CLASS 350 CEMENT MORTAR LINED DUCTILE IRON PIPE FOR DEPTHS GREATER THAN 12 FT. OR SLOPES GREATER THAN 18%.
8. UNLESS NOTED OTHERWISE, ALL SEWER GRADIENTS AND STATIONING HAVE BEEN CALCULATED TO THE CENTERLINE OF THE MANHOLE AND/OR APPURTENANCE.
9. SLOPE FOR SERVICE LATERALS SHALL BE 1.00% (MINIMUM) UNLESS APPROVED OTHERWISE BY THE ENGINEER.
10. COORDINATE SERVICE LOCATIONS WITH BUILDING PLUMBING PLANS AND K.U.B., AND MODIFY, AS NECESSARY TO ASSURE CONNECTIONS.
11. MAINTAIN 10 FEET (MINIMUM) HORIZONTAL SEPARATION BETWEEN WATER AND SEWER MAIN AND SERVICE LINES.
12. CONTRACTOR TO FIELD VERIFY LOCATION AND ELEVATIONS OF EXISTING SANITARY SEWER LINES PRIOR TO ORDERING MATERIALS OR COMMENCING CONSTRUCTION ACTIVITIES.
13. SANITARY SEWER CLEANOUTS SHALL BE ZURN Z1402 METAL CLEANOUT BOX OR EQUAL.

LEGEND

- EXISTING CONTOUR (884)
- PROPOSED INDEX CONTOUR (890)
- PROPOSED SPOT ELEVATION (97.50)
- EXIST. STORM (ST)
- EXIST. SEWER (SA)
- EXIST. WATER (W)
- EXIST. FENCE
- EXIST. POWER POLE

REVISIONS	DATE

CANNON & CANNON INC
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901 N. BROADWAY ST.
KNOXVILLE, TENNESSEE 37917

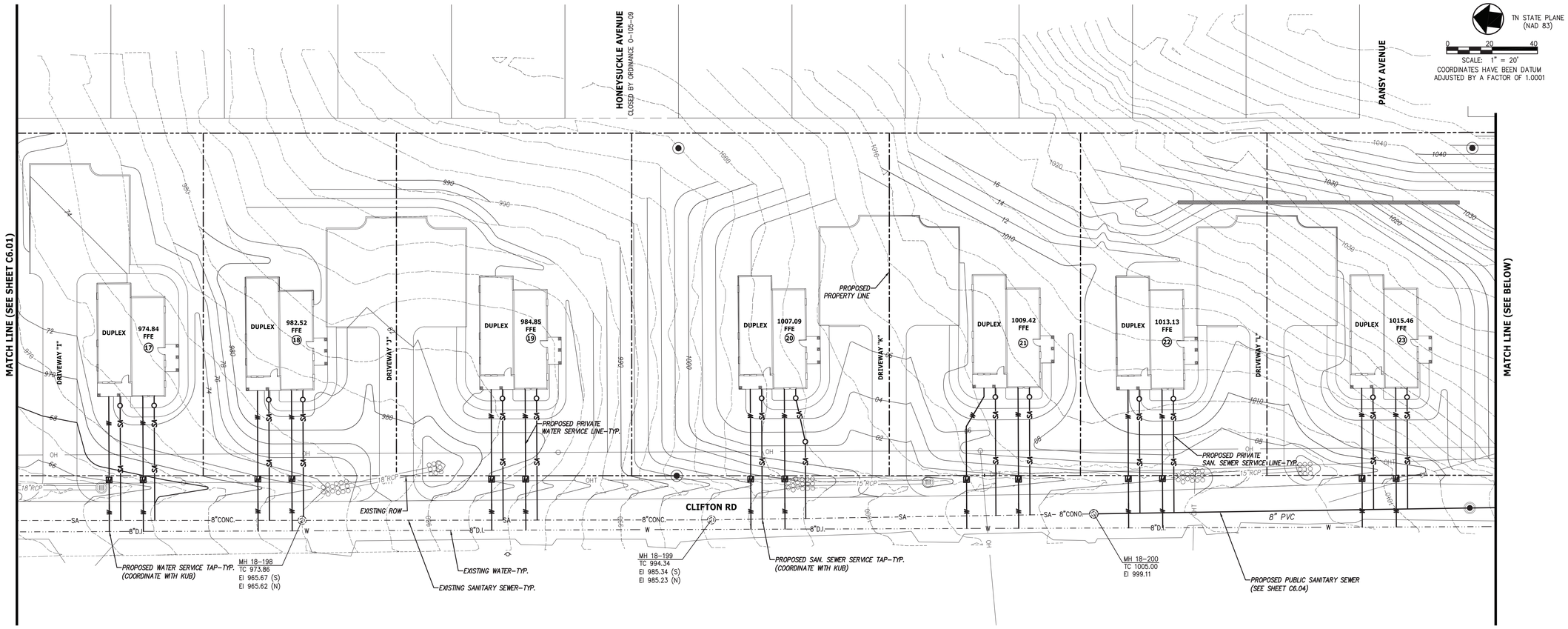
PROJECT:
CLIFTON ROAD DEVELOPMENT
404 CLIFTON ROAD
KNOXVILLE, TENNESSEE

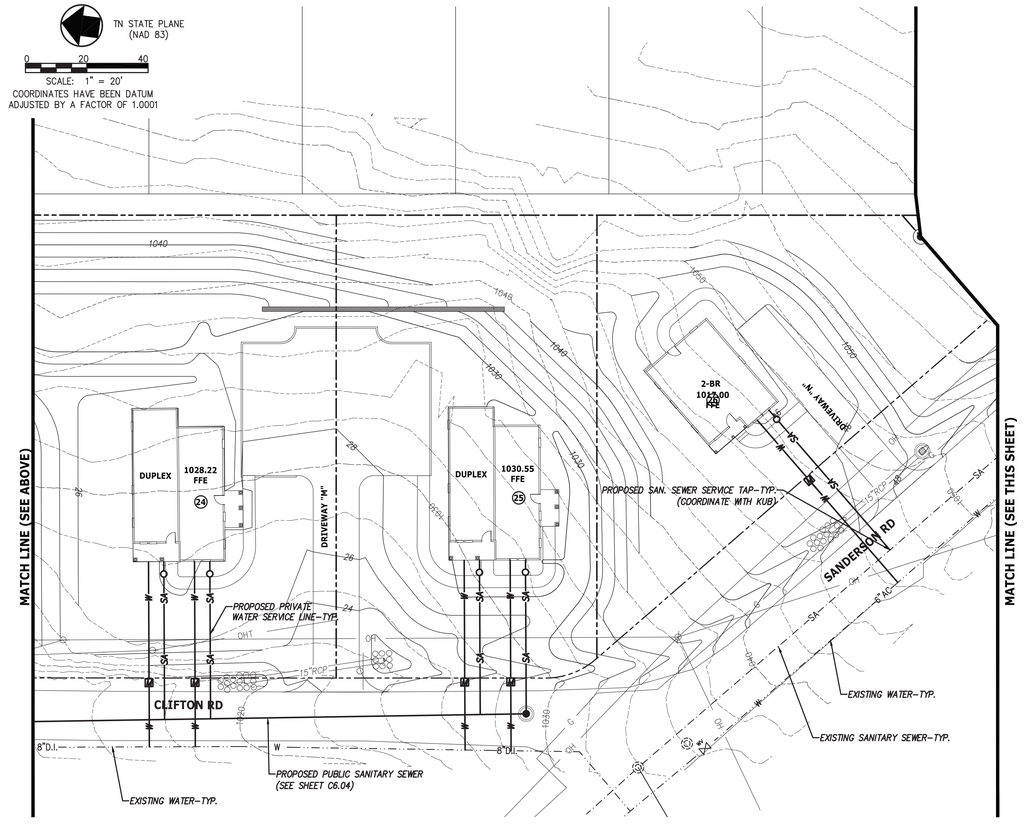
SITE UTILITIES PLAN

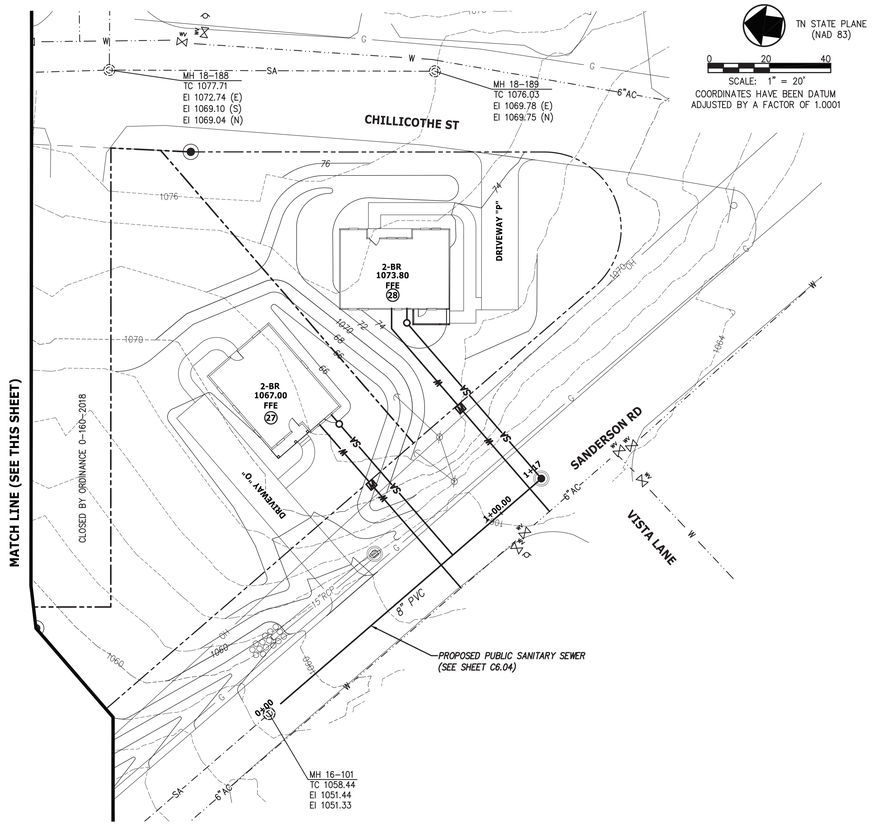
JASON R. HUNT — REGISTERED PROFESSIONAL ENGINEER — AGRICULTURE — No. 112487 — STATE OF TENNESSEE — 02/19/19

CCI PROJECT NO.	00216-0005
DRAWING DATE	FEBRUARY 19, 2019
PM JRH	QC -
DRAWN LED	

C6.01







NOTES:

1. *SEE SHEET C6.01 FOR GENERAL, WATER AND SEWER NOTES.*

LEGEND

- EXISTING CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED SPOT ELEVATION
- EXIST. STORM
- EXIST. SEWER
- EXIST. WATER
- EXIST. FENCE
- EXIST. POWER POLE

REVISIONS	DATE

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PROJECT:
CLIFTON ROAD DEVELOPMENT
404 CLIFTON ROAD
KNOXVILLE, TENNESSEE

SITE UTILITIES PLAN

JASON R. HUNT — REGISTERED ENGINEER — No. 112481 — STATE OF TENNESSEE
02/19/19

CCI PROJECT NO.	00216-0005
DRAWING DATE	FEBRUARY 19, 2019
PM JRH	QC -
DRAWN LED	

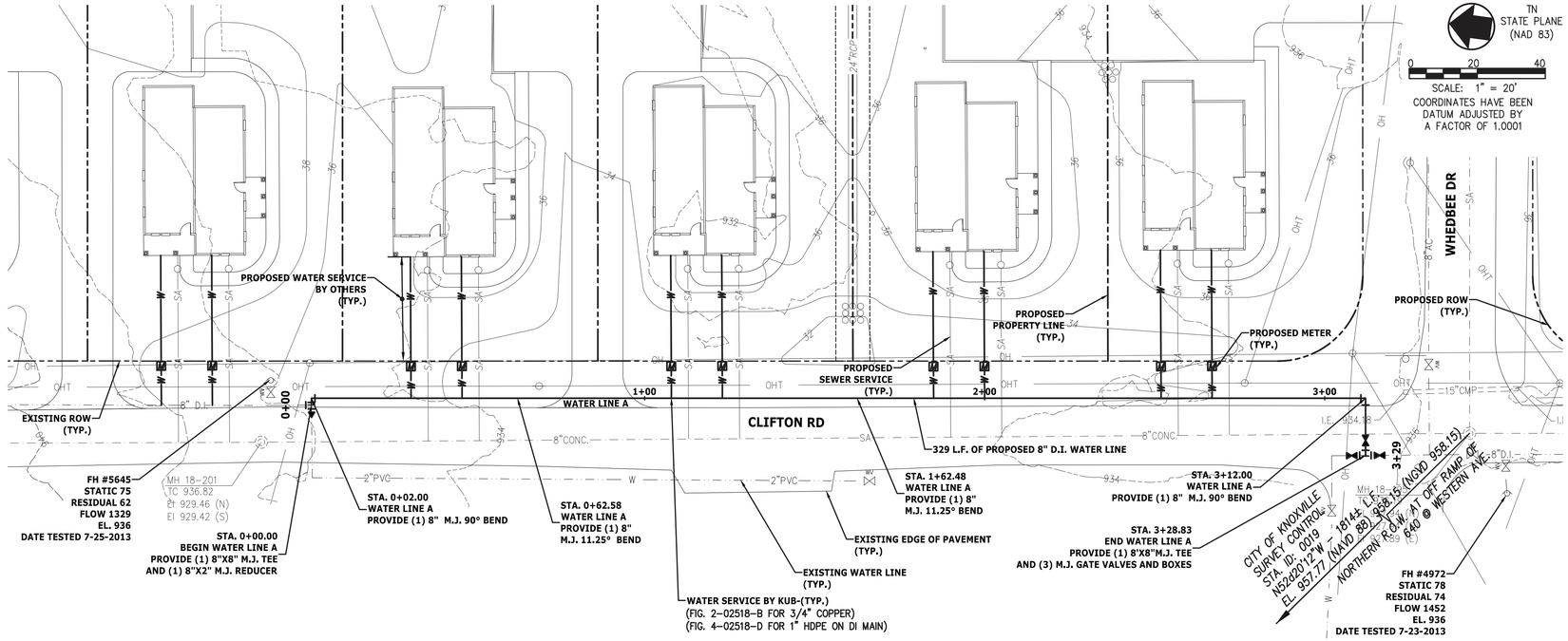
C6.02

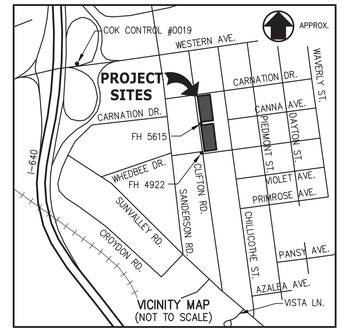
GENERAL NOTES:

1. THE BOUNDARY AND TOPOGRAPHIC DATA SHOWN WAS PROVIDED BY CANNON AND CANNON, INC. DATED AUGUST 17, 2018.
2. ROAD RIGHT-OF-WAYS OR UTILITY EASEMENTS SHALL BE TO FINISHED GRADE AND SLOPED TO MEET REQUIRED SPECIFICATIONS OR AS APPROVED BY KUB PRIOR TO STAKING AND INSTALLING MAINS.
3. THE DEVELOPER'S AUTHORIZED REPRESENTATIVE SHALL STAKE THE PROPOSED WATER MAIN LAYOUTS, PROPERTY CORNERS, AND EASEMENT LOCATIONS ETC., PRIOR TO CONSTRUCTION OR APPROVAL OF PLANS OR BOTH TO ALLOW AMPLE TIME FOR KUB'S INSPECTORS TO INSPECT THE LAYOUTS PRIOR TO CONSTRUCTION. KUB WILL DETERMINE IF STAKING MAY BE REQUIRED PRIOR TO APPROVAL OF PLANS.
4. CONSTRUCTION MATERIALS MUST MEET KUB SPECIFICATIONS. KUB REPRESENTATIVES MUST APPROVE MATERIAL SUBMITTALS PRIOR TO CONSTRUCTION.
5. WATER MAIN INSTALLATION MUST BE INSPECTED BY KUB. CONTACT KUB FIELD SERVICES AT LEAST THREE (3) DAYS PRIOR TO CONSTRUCTION AT 558-2786. TRENCHES SHALL BE LEFT OPEN AND NOT BACKFILLED UNTIL INSPECTED BY KUB.
10. CONTRACTOR SHALL NOT HAVE MORE THAN 200 LF OF TRENCH OPEN AT ANY TIME WITHOUT PRIOR APPROVAL.
11. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
12. PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD THE EXISTING UTILITIES FROM DAMAGE DURING THE CONSTRUCTION OF THIS PROJECT. FURNISH ANY SPECIAL EQUIPMENT REQUIRED TO WORK OVER AND AROUND THE UTILITIES.
13. CONTRACTOR WILL STERILIZE WATER MAINS WHEN INSTALLATION AND TESTING ARE COMPLETE. CONTRACTOR SHALL PROVIDE TAPS AS REQUIRED FOR STERILIZING MAINS. WATER QUALITY SAMPLING AND TESTING WILL BE PERFORMED BY KUB.
14. CONTRACTOR MUST HAVE A VALID STATE OF TENNESSEE MUNICIPAL UTILITY LICENSE FOR CONSTRUCTION OF WATER MAINS ON SITE AT ALL TIMES.
15. AIR RELEASE VALVES SHALL BE INSTALLED ON HIGH POINTS ON THE MAINS IN ACCORDANCE WITH THE PLANS AND/OR AS REQUESTED BY KUB'S INSPECTORS.
16. THE CONTRACTOR MUST HAVE WATER SERVICE LINES INSTALLED ACROSS STREETS BEFORE ANY SURFACE COVER IS FINALIZED TO INCLUDE PAVING, CONCRETE DRIVEWAYS, ETC.
17. WHERE SIDEWALKS ARE DAMAGED OR REMOVED, THEY SHALL BE REPLACED ACCORDING TO THE CITY OF KNOXVILLE STANDARD SPECIFICATIONS.
18. UPON REQUEST, CANNON AND CANNON INC. WILL PROVIDE AUTOCAD .DWG FILE WITH DESIGN LAYOUT FOR WATER AND SEWER CONSTRUCTION STAKING PURPOSES

WATER LINE NOTES:

1. ALL WATER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE KNOXVILLE UTILITIES BOARD'S STANDARD WATER SYSTEM SPECIFICATIONS AND DETAILS. PRIVATE WATER LINES SHALL BE INSTALLED PER THE INTERNATIONAL BUILDING CODE REQUIREMENTS.
2. REQUIREMENTS FOR PROPER TRENCH AND BACKFILL OPERATIONS MUST MEET OR EXCEED THE CITY OF KNOXVILLE, KNOX COUNTY, AND T.D.O.T.
3. THE LOCATIONS OF THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE AND THOSE SHOWN MAY NOT BE ALL OF THE EXISTING UTILITIES WITHIN THE WORK AREA. THE EXACT LOCATIONS AND EXISTENCE OF ALL UTILITIES ARE THE CONTRACTOR'S RESPONSIBILITIES AND SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED. LOCATION OF EXISTING UTILITIES CAN BE COORDINATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, AT 811.
4. WATER SERVICES SHALL BE BURIED AT A MINIMUM DEPTH OF 24 INCHES TO PREVENT FREEZING.
5. MINIMUM 36 INCHES DEPTH OF COVER FOR WATER MAINS. COORDINATE WATER MAIN DEPTH WITH OTHER PROPOSED UTILITIES AS SHOWN ON ALL PROFILES FOR THIS PROJECT.
6. UTILITIES SHALL BE INSTALLED AFTER GRADING HAS BEEN COMPLETED AND APPROVED BEFORE ANY SURFACE COVER IS FINALIZED TO INCLUDE PAVING, CONCRETE DRIVEWAYS, ETC.
7. AFTER COMPLETING EACH SECTION OF WATER, ALL DEBRIS AND CONSTRUCTION MATERIALS SHALL BE REMOVED FROM THE WORK SITE. THE DISTURBED GROUND SURFACE SHALL BE SMOOTHLY GRADED.
8. ALL WATER VALVES SHALL CONFORM TO KUB STANDARDS AND SPECIFICATIONS.
9. KUB PERSONNEL WILL TEST WATER SERVICE TO THE EXISTING PUBLIC ROW OR EASEMENT FROM THE EXISTING SYSTEM FOR THE PROPOSED WATER SYSTEM.
10. HORIZONTAL SEPARATION BETWEEN WATER AND SEWER MAINS IS A MINIMUM OF 10 FEET.
11. WATER MAINS ARE NOT INSTALLED IN THE SAME TRENCH WITH OTHER UTILITIES UNLESS APPROVED THROUGH KUB ENGINEERING IN WRITING.
12. ANY FIELD CHANGES TO APPROVED PLANS MUST BE APPROVED BY THE APPROPRIATE KUB REPRESENTATIVE BEFORE CONSTRUCTION.
13. A COPY OF THE LATEST APPROVED SET OF UTILITY PLANS DESIGNATED BY THE RED KUB/TDEC RED STAMP MUST BE PRESENT DURING ALL TIMES OF CONSTRUCTION OF THE APPROPRIATE UTILITIES.
14. CONTRACTOR SHALL USE RESTRAINED JOINT FITTINGS OR REACTION BLOCKING AS REQUIRED FOR PROPER HORIZONTAL AND VERTICAL THRUST RESTRAINT. WHERE PLANS DO NOT SPECIFICALLY REQUIRE RESTRAINED JOINT FITTINGS OR REACTION BLOCKING, THE CONTRACTOR MAY CHOOSE METHOD OF RESTRAINT. REACTION BLOCKING IS SPECIFIED IN KUB STANDARD SPECIFICATION 02513.
15. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL EXISTING SERVICES DURING CONSTRUCTION. WHERE SERVICE INTERRUPTIONS CANNOT BE AVOIDED, COORDINATE WITH KUB IN ORDER TO MINIMIZE SERVICE INTERRUPTION.
16. CONTRACTOR SHALL PROVIDE ALL TEMPORARY TAPS, FITTINGS, VALVES, ETC. TO FACILITATE FILLING THE MAIN WITH POTABLE WATER. AIR RELEASE, SAMPLING, ETC. THESE MATERIALS SHALL BE CONSIDERED INCIDENTAL TO THE WORK.
17. CONTRACTOR SHALL MAINTAIN ACCESS FOR LOCAL TRAFFIC AND EMERGENCY VEHICLES AT ALL TIMES.

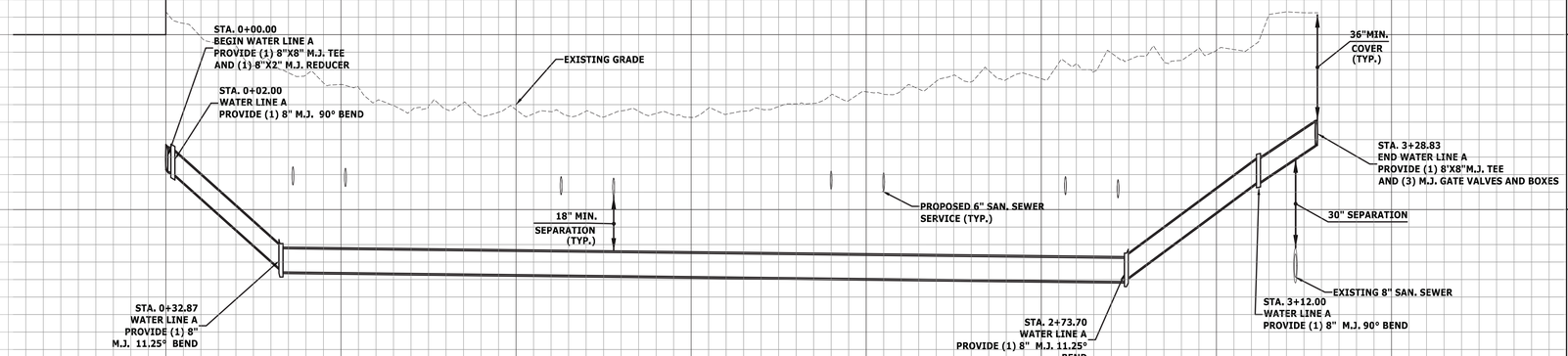




SPECIAL NOTE:

1. WHEN EXCAVATION MUST OCCUR NEAR A UTILITY POLE, THE CONTRACTOR SHALL EMPLOY A LICENSED ELECTRICAL CONTRACTOR TO GUY, ANCHOR, BRACE, MECHANICALLY HOLD, ETC., THE POLE THROUGHOUT THE EXCAVATION PROCESS AND UNTIL THE AREA CAN BE PROPERLY BACKFILLED AND COMPACTED TO PREVENT THE MOVEMENT OF THE POLE. IF THE EXCAVATION AFFECTS AN ANCHOR, THE POLE WILL NEED TO BE STABILIZED IN A SIMILAR MANNER UNTIL THE ANCHOR CAN BE REINSTALLED IN THE EXACT LOCATION. CONTRACTOR SHALL NOTIFY KUB NOT LESS THAN SEVEN (7) CALENDAR DAYS PRIOR TO EXCAVATION WITHIN TWENTY (20) FEET OF ANY POLE AND SHALL PROVIDE INFORMATION TO KUB PERTAINING TO THE METHOD THAT IS TO BE USED TO STABILIZE THE POLE, AS WELL AS THE NAME OF THE ELECTRICAL CONTRACTOR RESPONSIBLE FOR THE PORTION OF THE WORK.

PROPERTY UNITS	
MATERIALS	QTY
8" DIP WATER LINE	330
90° – 8" M.J. BENDS	2
22.5° – 8" M.J. BENDS	0
11.25° – 8" M.J. BENDS	2
8"X8" M.J. TEE	2
8"X2" M.J. REDUCER	1
8" GATE VALVES & BOXES	3



PUBLIC WATER LINE "A" PROFILE

SCALE: 1"=20' HORIZ.
1"=10' VERT.

CONSTRUCTION PLANS FOR: CLIFTON ROAD DEVELOPMENT

ENGINEER

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
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WWW.CANNON-CANNON.COM | Knoxville, TN 37919

DESIGNED JRH
DRAWN LED
CHECKED JRH

APPROVED

ENGINEER

SEWER

02/19/19

JASON R. HUNT REGISTERED ENGINEER AGRICULTURE No. 112487 STATE OF TENNESSEE

NO.	DATE	REVISION	APPR.

SCALE
AS SHOWN

DATE
02-19-2019

KUB
ENGINEERING DIVISION

CLIFTON ROAD DEVELOPMENT
404 CLIFTON ROAD
KNOXVILLE, TENNESSEE

PUBLIC WATER LINE "A" PLAN AND PROFILE
STA. 0+00 TO STA. 328.83 (E.O.L.)

CCI PROJECT NO: 00216-0005

SHEET **C6.03**
SHEET 1 OF 3

LEGEND

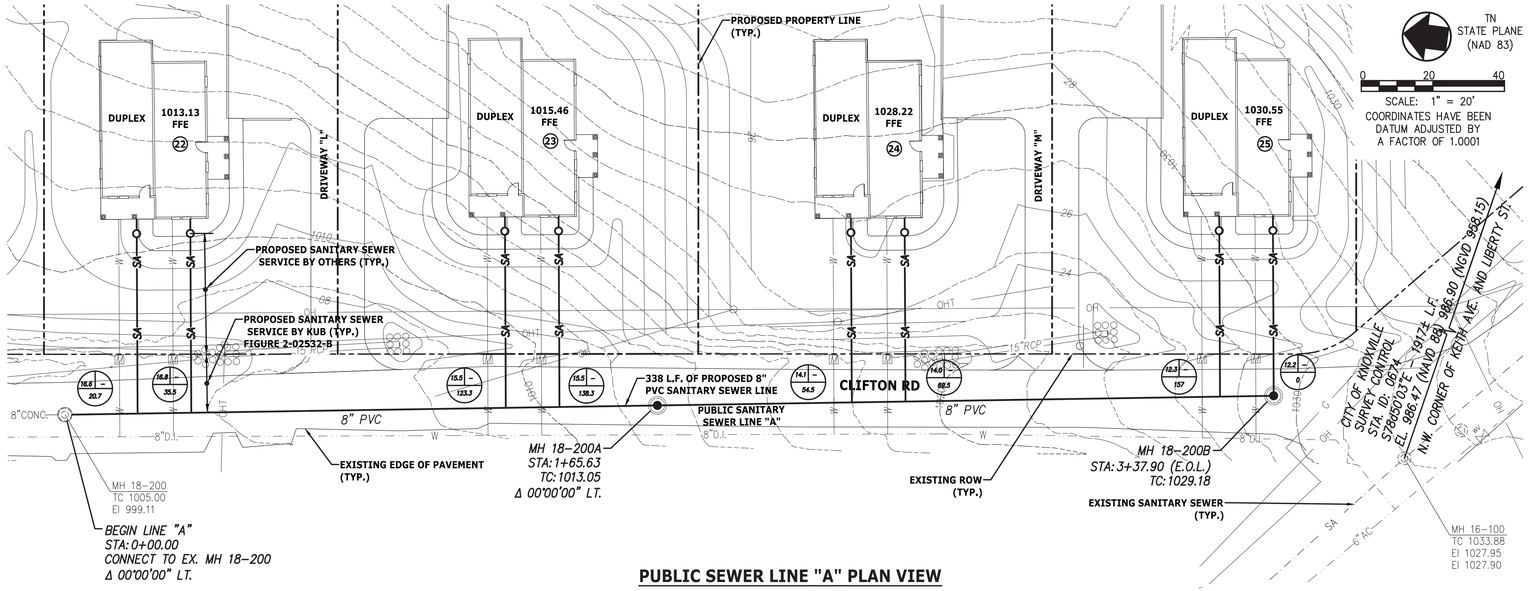
- EXISTING SANITARY MANHOLE
- PROPOSED SANITARY MANHOLE
- EXISTING SANITARY LINE
- PROPOSED SANITARY LINE
- -S- TEMPORARY SILT-FENCE EROSION CONTROL
- WATER STOP
- WHERE:
  - A = #FT LENGTH OF THE LATERAL FROM THE MAIN TO THE PROPERTY LINE
  - B = #FT OF DEPTH WHERE THE LATERAL TAPS INTO THE SEWER MAIN (NOT NECESSARY UNTIL ASBUILTS)
  - C = #FT FROM THE NEAREST DOWNSTREAM MANHOLE

GRAVITY SEWER NOTES:

1. ALL SANITARY SEWER LINES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE KUB'S STANDARD SEWER SYSTEM SPECIFICATIONS AND DETAILS.
2. LOCATION OF ALL EXISTING UTILITIES IS APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION.
3. ALL PIPE SHALL BE INSTALLED IN THE PRESENCE OF THE OWNER.
4. UTILITIES SHALL BE INSTALLED AFTER GRADING HAS BEEN COMPLETED AND APPROVED BEFORE ANY SURFACE COVER IS FINALIZED TO INCLUDE PAVING, CONCRETE DRIVEWAYS, ETC.
5. TRENCH DESIGN AND SAFETY FOR PIPELINE CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
6. REQUIREMENTS FOR PROPER TRENCH AND BACKFILL OPERATIONS MUST MEET OR EXCEED CITY OF KNOXVILLE, KNOX COUNTY, AND TDOT STANDARDS.
7. AFTER COMPLETING EACH SECTION OF THE SEWER, ALL DEBRIS AND CONSTRUCTION MATERIALS SHALL BE REMOVED FROM THE WORK SITE AS WELL AS SMOOTHLY GRADING THE DISTURBED GROUND SURFACE ON THE PROJECT SITE.
8. THE CONTRACTOR SHALL OBTAIN PLASTIC WARNING TAPE FOR WASTEWATER MAINS AND BURY IT ONE FOOT ABOVE THE ENTIRE LENGTH OF EACH LATERAL. A 3/8 INCH DIAMETER STEEL REBAR SHALL BE DRIVEN INTO THE GROUND AT THE END OF EACH LATERAL AND PAINTED GREEN. THE BURIED END OF THE REBAR SHALL BE BENT TO FORM A HOOK.
9. SANITARY SEWER FLOW CONTROL (SECTION 02542 OF KUB STANDARDS AND SPECIFICATIONS) REQUIREMENTS ARE FULLY UNDERSTOOD AND IMPLEMENTED IN THE WASTEWATER PROJECT.
10. ANY FIELD CHANGES TO APPROVED PLANS MUST BE APPROVED BY THE APPROPRIATE KUB REPRESENTATIVE BEFORE CONSTRUCTION.
11. A COPY OF THE LATEST APPROVED SET OF UTILITY PLANS DESIGNATED BY THE KUB RED STAMP MUST BE PRESENT DURING ALL TIMES OF CONSTRUCTION OF THE APPROPRIATE UTILITIES.
12. SEWER SERVICE LATERALS SHALL BE CONNECTED TO CLEANOUT AS DEPICTED IN FIGURE 2-02532-B, SECTION 02542 OF KUB STANDARDS AND SPECIFICATIONS. SEWER SERVICE LATERALS SHALL NOT BE CONNECTED TO SERVICE RISERS OR LATERAL COMPONENTS OF CLEANOUT.

WASTEWATER FLOW CONTROL NOTES

1. WASTEWATER FLOW MUST BE MAINTAINED IN THE EXISTING SEWERS, IN ACCORDANCE WITH SECTION 02542 SEWER FLOW CONTROL. WHENEVER PIPE-LAYING PROGRESSES TO THE POINT WHERE THIS FLOW MUST BE INTERRUPTED, THE CONTRACTOR SHALL PLUG THE SEWER UPSTREAM OF THE CONSTRUCTION AND PROVIDE BY-PASS PUMPING TO THE DOWNSTREAM MANHOLE. ALL DOWNSTREAM PIPES, MANHOLES AND APPURTENANCES MUST BE TESTED AND ACCEPTABLE TO THE OWNER TO RECEIVE WASTEWATER FLOW. DISCHARGING RAW WASTEWATER TO NATURAL WATERWAYS WILL NOT BE PERMITTED. THE CONTRACTOR SHALL PROVIDE, MAINTAIN, AND OPERATE ALL THE TEMPORARY FACILITIES SUCH AS DAMS, PLUGS, PUMPING EQUIPMENT (BOTH PRIMARY AND BACK-UP UNITS) AS NECESSARY TO INTERCEPT THE SEWAGE FLOW BEFORE IT REACHES THE POINT WHERE IT WOULD INTERFERE WITH HIS/HER WORK, CARRY IT PAST HIS/HER WORK AND RETURN IT TO THE EXITING SEWER DOWNSTREAM OF HIS/HER WORK.
2. CONTRACTOR WILL BE LIABLE FOR CLEAN-UPS, FINES, AND ANY OTHER PROBLEMS THAT MAY OCCUR.
3. THE CONTRACTOR SHALL SUBMIT TO THE OWNER, FOR APPROVAL BY K.U.B., A DESCRIPTION OF THE BYPASS PUMPING METHODOLOGY, AND BYPASS PUMPING PLAN BEFORE THE CONTRACTOR COMMENCES SEWAGE BYPASS PUMPING.
4. PROVIDE ADEQUATE CAPACITY AND SIZE TO HANDLE EXISTING FLOWS PLUS ADDITION FLOW THAT MAY OCCUR DURING PERIODS OF A RAINSTORM. ESTIMATE PEAK AMOUNTS OF FLOW TO BE BYPASSED AND PROVIDE BYPASS FLOW CAPACITY OF AT LEAST 125 PERCENT OF PEAK FLOW ESTIMATE.
5. OPERATE AND MAINTAIN FLOW CONTROL SYSTEM 24 HOURS PER DAY, 7 DAYS PER WEEK INCLUDING HOLIDAYS, AS REQUIRED TO CONTROL FLOW.
6. REFER TO SECTION 02542, SEWER FLOW CONTROL OF KUB STANDARDS AND SPECIFICATIONS FOR REQUIRED SUBMITTALS AND REQUIREMENTS.



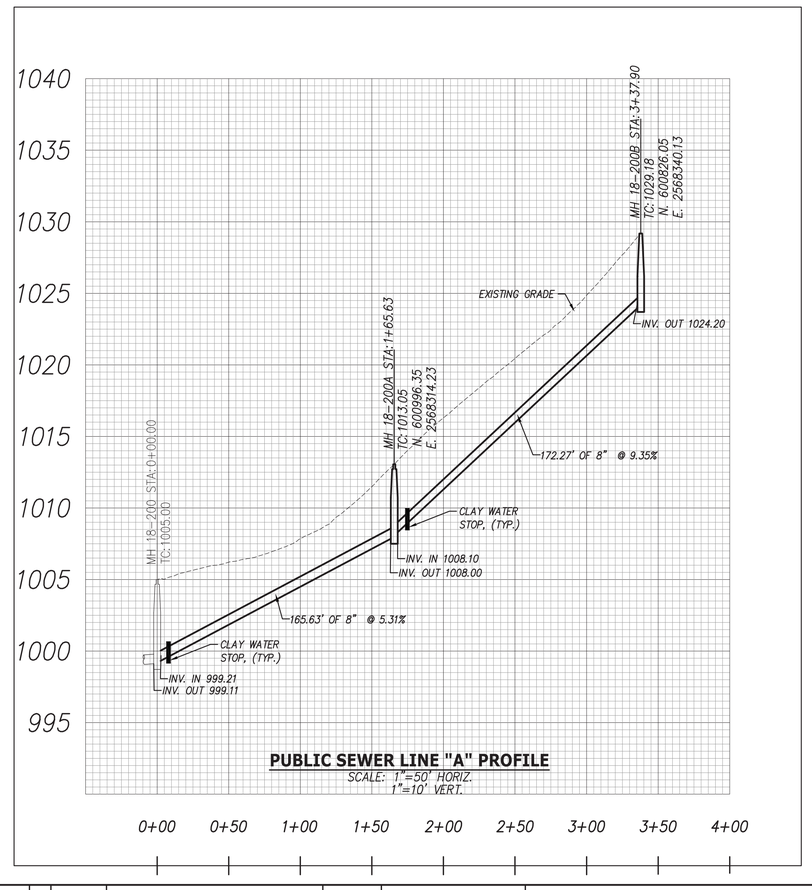
TN STATE PLANE (NAD 83)

0 20 40

SCALE: 1" = 20'

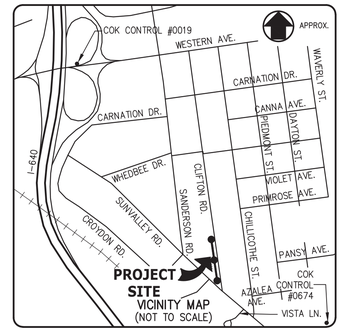
COORDINATES HAVE BEEN DATUM ADJUSTED BY A FACTOR OF 1.0001

PUBLIC SEWER LINE "A" PLAN VIEW



PUBLIC SEWER LINE "A" PROFILE

SCALE: 1"=50' HORIZ.
1"=10' VERT.



VICINITY MAP (NOT TO SCALE)

KUB WASTEWATER CONSTRUCTION NOTES:

1. ROAD RIGHT-OF-WAYS SHALL BE GRADED AND SLOPED TO REQUIRED SPECIFICATIONS OR AS APPROVED BY KUB PRIOR TO STAKING AND INSTALLING WASTEWATER MAINS.
2. THE DEVELOPER'S AUTHORIZED REPRESENTATIVE SHALL STAKE THE PROPOSED WASTEWATER MAIN LAYOUTS, PROPERTY CORNERS, AND EASEMENT LOCATIONS, ETC... PRIOR TO CONSTRUCTION TO ALLOW AMPLE TIME FOR KUB'S INSPECTORS TO INSPECT THE LAYOUTS PRIOR TO CONSTRUCTION. KUB WILL DETERMINE IF STAKING MAY BE REQUIRED PRIOR TO APPROVAL OF PLANS.
3. CONSTRUCTION MATERIALS MUST MEET KUB SPECIFICATIONS. KUB REPRESENTATIVES MUST APPROVE MATERIALS SUBMITTALS PRIOR TO CONSTRUCTION.
4. WASTEWATER MAIN INSTALLATION MUST BE INSPECTED BY KUB. CONTACT KUB FIELD SERVICES AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION AT 558-2786. TRENCHES SHALL BE LEFT OPEN AND NOT BACKFILLED UNTIL INSPECTED BY KUB.
5. CONTACT KUB FIELD SERVICES AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION AT 558-2786 TO INSPECT FROM CLEANOUT TO STRUCTURE WHEN PROJECT IS LOCATED OUTSIDE OF CITY OF KNOXVILLE LIMITS.
6. CONTRACTOR MUST HAVE A VALID STATE OF TENNESSEE MUNICIPAL UTILITY LICENSE FOR CONSTRUCTION
7. AN A-LOCK OR Z-LOCK GASKET SHALL BE PROVIDED FOR EACH WASTEWATER MAIN OR LATERAL CONNECTING TO A NEW MANHOLE. EACH TAP TO AN EXISTING MANHOLE MUST BE MECHANICALLY CORED
8. THE CONTRACTOR MUST INSTALL LATERALS INSTALLED ACROSS STREETS BEFORE ANY SURFACE COVER IS FINALIZED TO INCLUDE PAVING, CONCRETE DRIVEWAYS, ETC.
9. WATER STOPS SHALL BE INSTALLED IN SEWER LINE TRENCHES NO MORE THAN 500 FEET APART TO PREVENT WATER FROM DRAINING THROUGH THE GRAVEL BEDDING. THE STOPS SHALL CONSIST OF COMPACTED CLAY AT LEAST THREE (3) FEET THICK FROM THE BOTTOM OF THE TRENCH TO THE TOP OF THE TRENCH. THE STOPS SHALL BE CUT A MINIMUM DEPTH OF TWO (2) FEET INTO BOTH WALLS OF THE TRENCH. THE PREFERRED LOCATION OF A WATER STOP IS UPSTREAM OF EACH MANHOLE. ALL STREAM CROSSINGS SHALL INCLUDE WATER STOPS ON BOTH SIDES OF CROSSING.

GRAVITY WASTEWATER REQUIREMENTS:

1. LASERS SHALL BE USED TO INSTALL ALL WASTEWATER LINES.
2. ALL REQUIREMENTS FOR INSTALLATION OF GRAVITY SEWER (PART 3 IN SECTION 02532 OF KUB STANDARDS AND SPECIFICATIONS ARE TO BE UNDERSTOOD BY THE CONTRACTOR AND FULLY IMPLEMENTED IN THE ENTIRE WASTEWATER PROJECT.
3. ALL REQUIREMENTS FOR SEWER LATERALS (PART 3 IN SECTION 02532 OF KUB STANDARDS AND SPECIFICATIONS) ARE TO BE UNDERSTOOD BY THE CONTRACTOR AND FULLY IMPLEMENTED IN THE ENTIRE WASTEWATER PROJECT.
4. ALL REQUIREMENTS FOR TESTING OF GRAVITY SEWERS (PART 3 IN SECTION 02532 OF KUB STANDARDS AND SPECIFICATIONS) ARE TO BE UNDERSTOOD BY THE CONTRACTOR AND FULLY IMPLEMENTED IN THE ENTIRE WASTEWATER PROJECT.
5. THE MINIMUM WASTEWATER LATERAL HAS A 6-INCH DIAMETER PVC (SDR 26) FROM THE MAIN TO THE PROPERTY LINE OR EDGE OF EASEMENT.
6. ALL SEWER LATERALS SHALL INCLUDE 6-INCH TEE'S OF THE SAME MATERIAL AS THE SEWER MAINS.
7. TWO WAY DIRECTIONAL CLEANOUT TEES WILL BE REQUIRED ON ALL LATERALS. ***CLEANOUTS SHOULD BE LOCATED AT THE PROPERTY LINE*** OR EASEMENT LINE IN MOST CASES AND SHALL BE SDR 35 MANUFACTURED BY PLASTIC TRENDS, INC.
8. ALL LATERALS AND CLEANOUTS SHALL HAVE CAPS WITH SCREWED PLUGS INSTALLED.
9. ALL SEWER APPURTENANCES ARE REQUIRED TO HAVE WATERTIGHT FITTINGS.
10. ALL REQUIREMENTS WITH FLEXIBLE COUPLINGS AND SADDLE TEES (PARTS 2.02 AND 2.03 IN SECTION 02532 OF KUB STANDARDS AND SPECIFICATIONS) ARE TO BE FULLY UNDERSTOOD AND IMPLEMENTED.

PROPERTY UNITS	
MATERIALS	QTY
8" PVC SAN. SEWER LINE	338
MH'S	2
LATERALS	8

CONSTRUCTION PLANS FOR: CLIFTON ROAD DEVELOPMENT

ENGINEER

CANNON & CANNON INC
CONSULTING ENGINEERS · FIELD SURVEYORS
TEL 865.670.8555 | 8550 Kingston Pike Knoxville, TN 37919
WWW.CANNON-CANNON.COM

DESIGNED JRH
DRAWN LED
CHECKED JRH

APPROVED

ENGINEER

SEWER

02/19/19

JASON R. HUNT REGISTERED ENGINEER AGRICULTURE FORESTRY COMMERCE No. 112487 STATE OF TENNESSEE

NO.	DATE	REVISION	APPR.

SCALE AS SHOWN

DATE 02-19-2019

KUB
ENGINEERING DIVISION

CLIFTON ROAD DEVELOPMENT
404 CLIFTON ROAD
KNOXVILLE, TENNESSEE
PUBLIC SANITARY SEWER LINE "A" PLAN AND PROFILE STA. 0+00 TO 3+37.90 (E.O.L.)

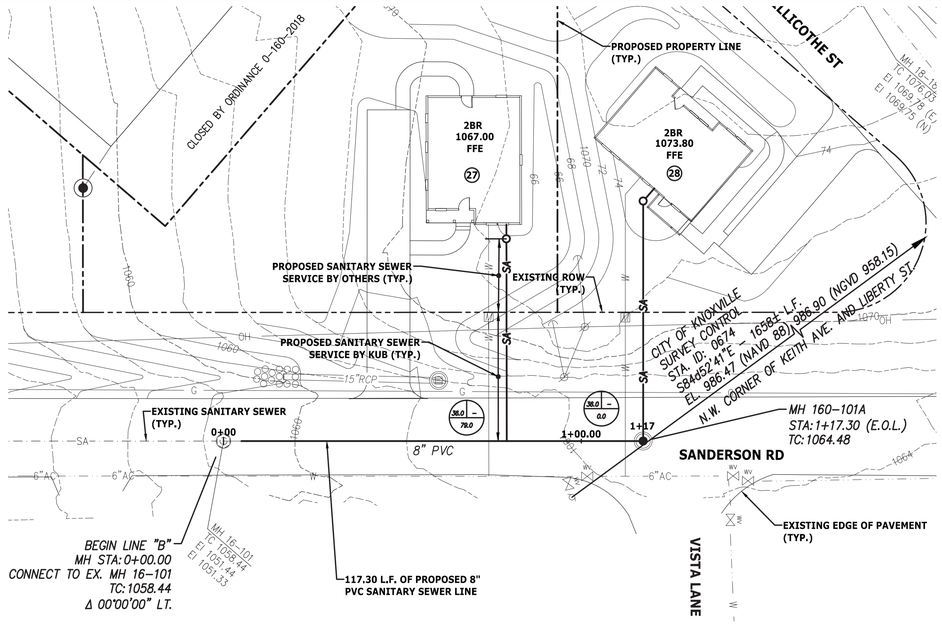
CCI PROJECT NO: 00216-0005

SHEET **C6.04**
SHEET 2 OF 3

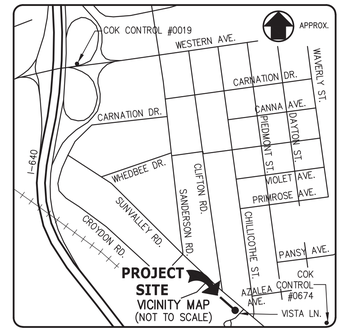
LEGEND

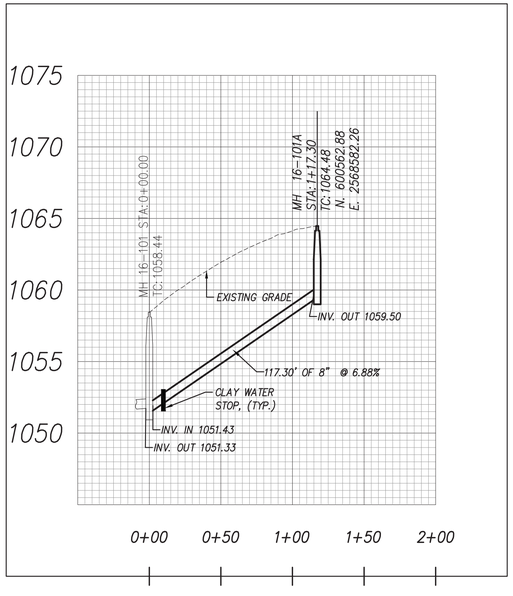
- EXISTING SANITARY MANHOLE
- PROPOSED SANITARY MANHOLE
- EXISTING SANITARY LINE
- PROPOSED SANITARY LINE
- S — TEMPORARY SILT-FENCE EROSION CONTROL
- WATER STOP

WHERE:
A = #FT LENGTH OF THE LATERAL FROM THE MAIN TO THE PROPERTY LINE
B = #FT OF DEPTH WHERE THE LATERAL TAPS INTO THE SEWER MAIN (NOT NECESSARY UNTIL ASBUILTS)
C = #FT FROM THE NEAREST DOWNSTREAM MANHOLE



PUBLIC SEWER LINE "B" PLAN VIEW





PUBLIC SEWER LINE "B" PROFILE

SCALE: 1"=50' HORIZ.
1"=10' VERT.

PROPERTY UNITS	
MATERIALS	QTY
8" PVC SAN. SEWER LINE	338
MH'S	2
LATERALS	8

CONSTRUCTION PLANS FOR: CLIFTON ROAD DEVELOPMENT

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DESIGNED JRH
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APPROVED
ENGINEER
SEWER

02/19/19
JASON R. HUNT REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 112487 STATE OF TENNESSEE

NO.	DATE	REVISION	APPR.

SCALE AS SHOWN
DATE 02-19-2019

KUB
ENGINEERING DIVISION

CLIFTON ROAD DEVELOPMENT
404 CLIFTON ROAD
KNOXVILLE, TENNESSEE

PUBLIC SANITARY SEWER LINE "B" PLAN AND PROFILE
STA. 0+00 TO 1+17.30 (E.O.L.)

CCI PROJECT NO: 00216-0005

SHEET **C6.05**
SHEET 3 OF 3