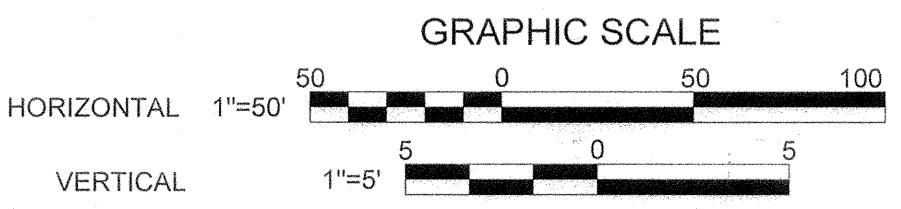


OFFSITE SEWER OUTFALL

**LEGEND:**

- LIMITS OF DISTURBANCE
- SF-SF- TREE PROTECTION / SILT COMBINATION FENCE
- SF- [Symbol] -SF- SILT FENCE OUTLET
- [Symbol] CONSTRUCTION ENTRANCE
- EX CONTOURS



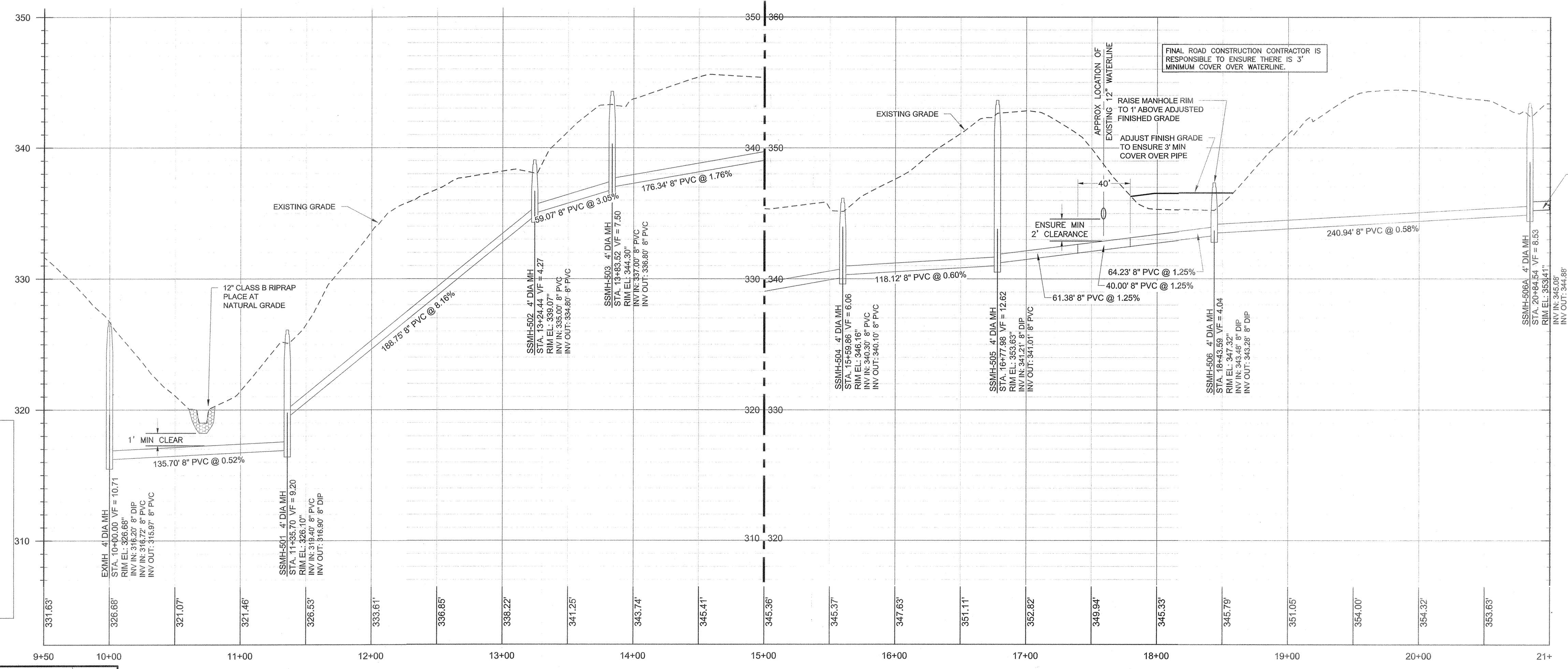
OFFSITE SEWER ESMT  
WAKE COUNTY REG.  
BOOK 17416  
PG 1894

**DISTURBED AREA**  
45,673 SF  
1.05 AC.

**Public Water Distribution / Extension System**  
The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh  
Public Utilities Department Permit # *W-2549*  
Authorization to Construct *[Signature]*  
Date *4/23/19*

**Public Sewer Collection / Extension System**  
The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh  
Public Utilities Department Permit # *5-4523*  
Authorization to Construct *[Signature]*  
Date *4/23/19*

**ATTENTION CONTRACTORS**  
The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least **twenty four hours** prior to beginning any of their construction.  
**Failure** to notify both City Departments in advance of beginning construction, will result in the issuance of **monetary fines**, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.  
**Failure** to call for **Inspection, Install a Downstream Plug, have Permitted Plans on the Jobsite**, or any other **Violation of City of Raleigh Standards** will result in a **Fine and Possible Exclusion** from future work in the City of Raleigh.



~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~

P:\2017\Projects\170416 Elizabeth Heights\Eng\CADD\DWG\Sheets\Offsite Sewer\CS20 Sewer Bypass Pumping Plan and Profile.dwg

REV. NO.	DESCRIPTIONS



**Bateman Civil Survey Company**  
Engineers • Surveyors • Planners  
2524 Reliance Avenue, Apex, North Carolina 27539  
Phone: 919.577.1080 Fax: 919.577.1081  
NCBELS FIRM No. C-2378

**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**  
1205 AVERETTE ROAD  
WAKE FOREST, NC 27587  
WAKE COUNTY, NC

**OFFSITE SEWER OUTFALL PLAN**

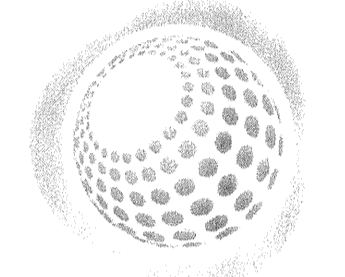
Project Engineer:	TSS
Designed By:	RAJ
Drawn By:	RAJ
Checked By:	TSS
Scale:	NTS
Date:	10/30/2018
Project Number:	170348

SHEET  
**420**

ELIZABETH HEIGHTS



**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELLS FIRM No. C-2378



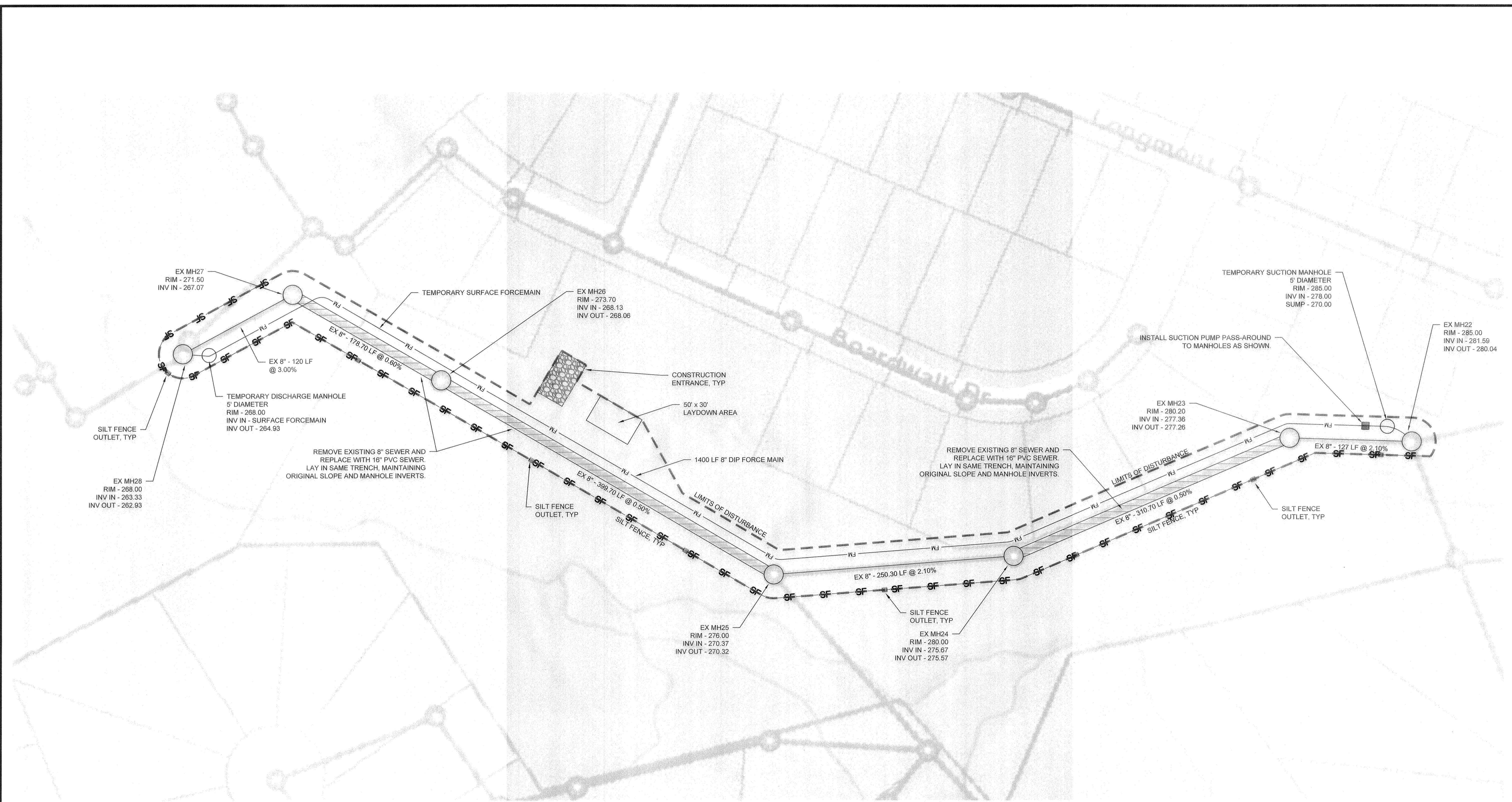
**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**

**REHABILITATION PLAN**  
**OFFSITE SEWER LINE**

Project Engineer: TSS  
 Designed By: RAJ  
 Drawn By: RAJ  
 Checked By: TSS  
 Scale: NTS  
 Date: 10/30/2018  
 Project Number: 170348

SHEET  
**421**

ELIZABETH HEIGHTS



**LEGEND:**  
 - - - - - LIMITS OF DISTURBANCE  
 - SF - SF - TREE PROTECTION / SILT COMBINATION FENCE  
 - SF - [Symbol] - SILT FENCE OUTLET  
 [Symbol] CONSTRUCTION ENTRANCE

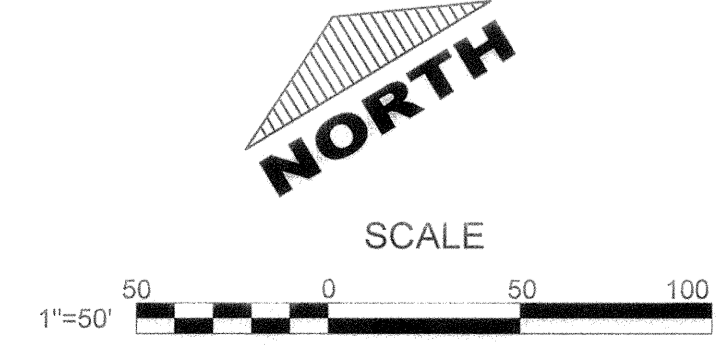
**DISTURBED AREA**  
 77,965 SF  
 1.79 AC.

**NOTES:**  
 3. BACKGROUND MAP IMAGERY TAKEN FROM WAKE COUNTY GIS.  
 4. CONTRACTOR SHALL PROVIDE STANDARD SPECIFICATIONS, DETAILS, AND A DETAILED CONSTRUCTION SEQUENCE FOR THE USE OF PUMP BYPASS EQUIPMENT, METHODS, AND FINAL TESTING.

**PUMP INFO:**  
 1. SUCTION STATIC LIFT: 14.6 FT  
 2. N.P.S.H. REQ'D: 33.44 FT  
 3. REQ'D HORSEPOWER: 16 HP  
 \* FINAL HYDRAULIC PUMP DESIGN IS TO BE SUBMITTED BY THE CONTRACTOR AND SEALED BY NC REGISTERED PE.

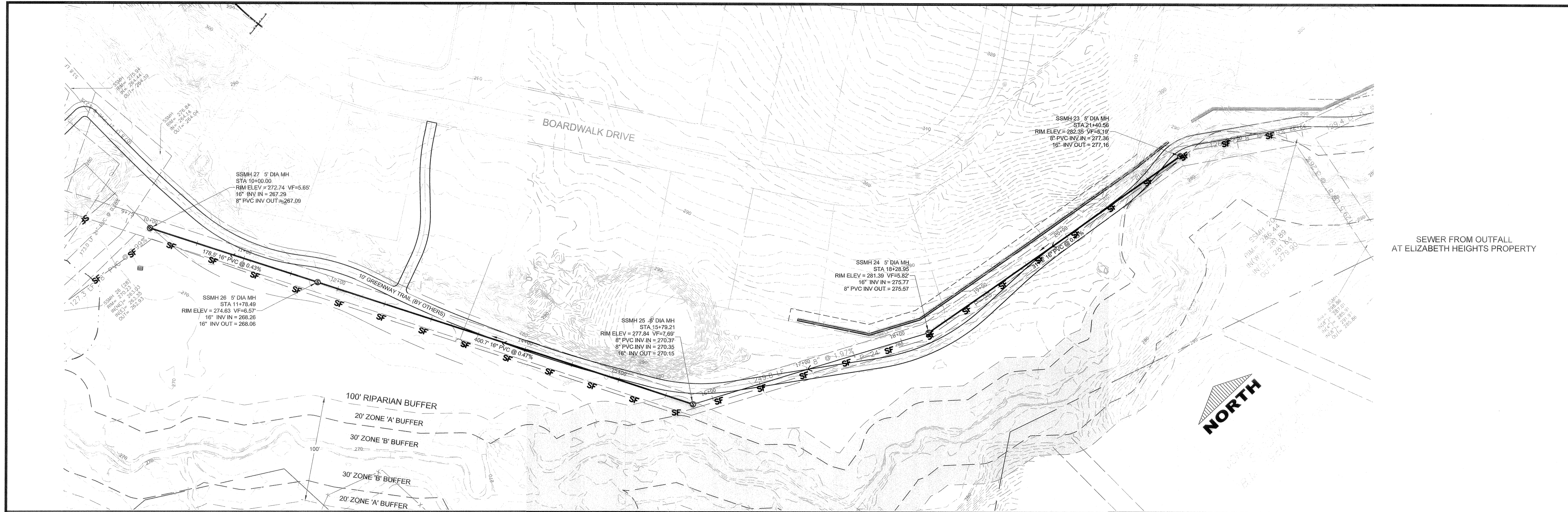
**SEWER FLOW INFO:**  
 PEAK FLOW: 685,313 GPD

City of Raleigh  
 Public Utilities Department  
 DATE 4/23/19  
 BY [Signature]



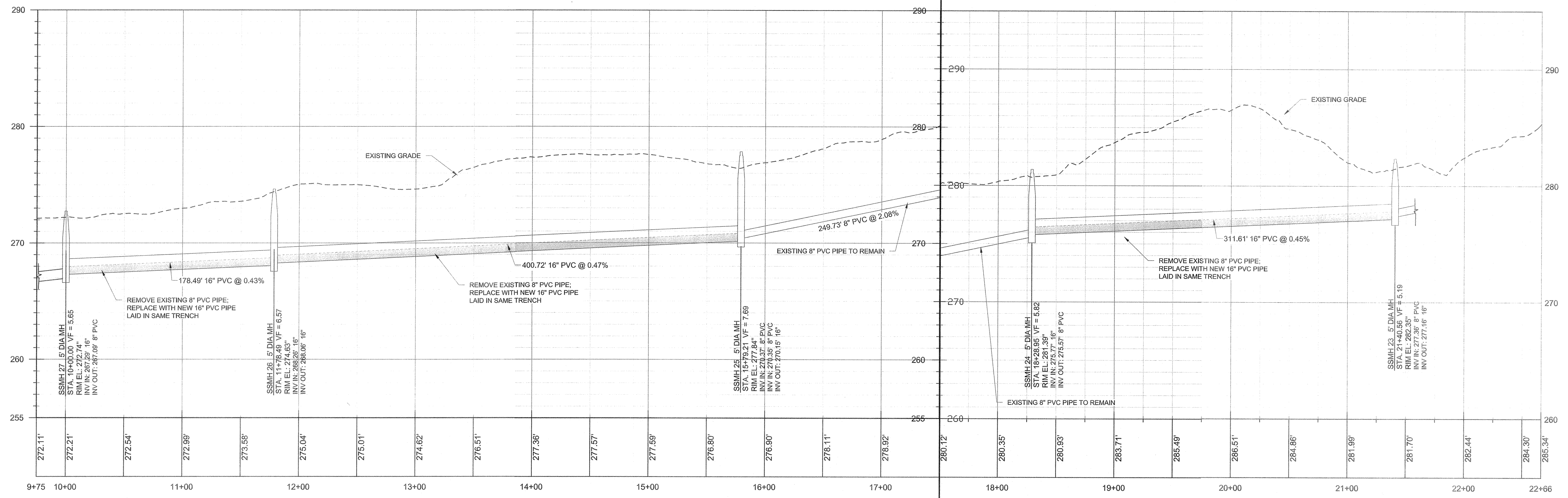
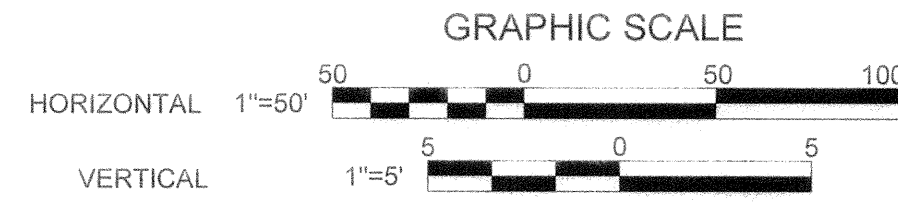
~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~

REV. NO.	DESCRIPTIONS



SEWER FROM OUTFALL AT ELIZABETH HEIGHTS PROPERTY

SEWER REHABILITATION PROFILE

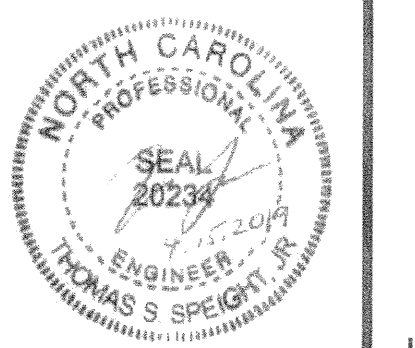


City of Raleigh  
Public Utilities Department  
DATE 4/23/14  
BY [Signature]

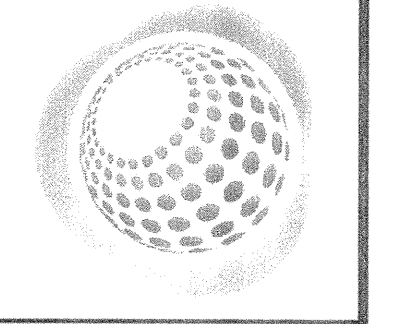


KNOW WHAT IS BELOW CALL BEFORE YOU DIG

REV. NO.	DESCRIPTIONS	REVISIONS



**Bateman Civil Survey Company**  
Engineers • Surveyors • Planners  
2524 Reliance Avenue, Apex, North Carolina 27539  
Phone: 919.577.080 Fax: 919.577.1081  
NCBELS FIRM No. C-2378



ELIZABETH HEIGHTS  
CONSTRUCTION DRAWINGS  
1205 AVERETTE ROAD  
WAKE FOREST, NC 27587  
WAKE COUNTY, NC

REHABILITATION PROFILE  
OFFSITE SEWER LINE

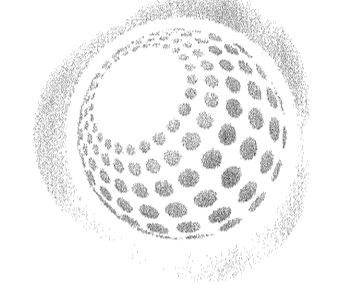
Project Engineer:	TSS
Designed By:	RAJ
Drawn By:	RAJ
Checked By:	TSS
Scale:	NTS
Date:	10/30/2018
Project Number:	170348

SHEET  
**422**

ELIZABETH HEIGHTS



**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCELS FIRM No. C-2378



**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**PLAN AND PROFILE**  
**KAVANAUGH RD.**

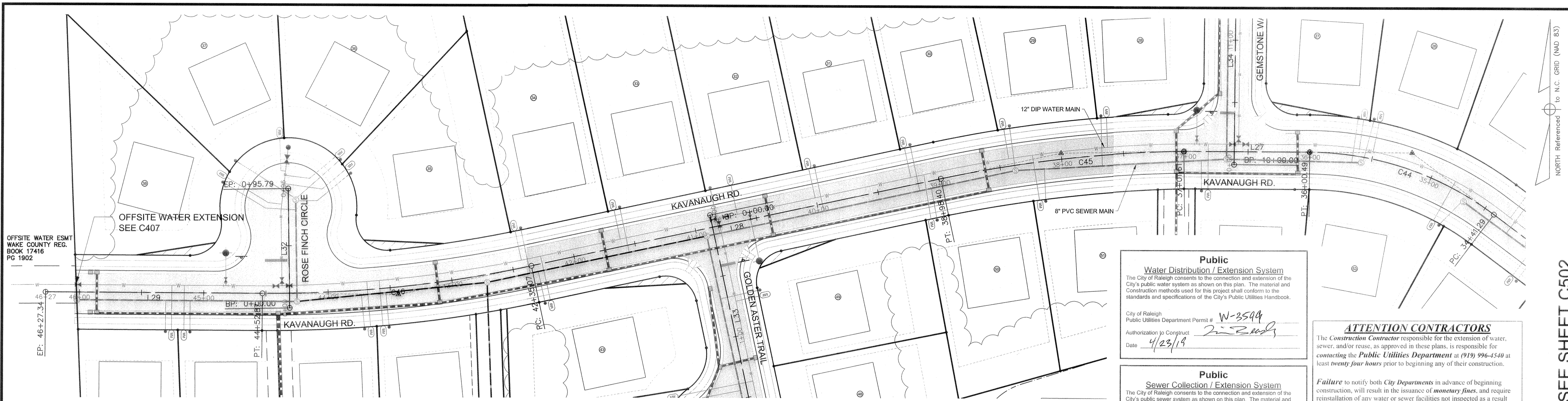
Project Engineer: TSS  
 Designed By: MP  
 Drawn By: MP  
 Checked By: TSS  
 Scale: AS SHOWN

Date: 10/30/2018

Project Number: 170348

SHEET  
**C501**

ELIZABETH HEIGHTS



**KAVANAUGH RD - PLAN**  
 SCALE: 1"=40'  
 STA: 34+30 - 46+27

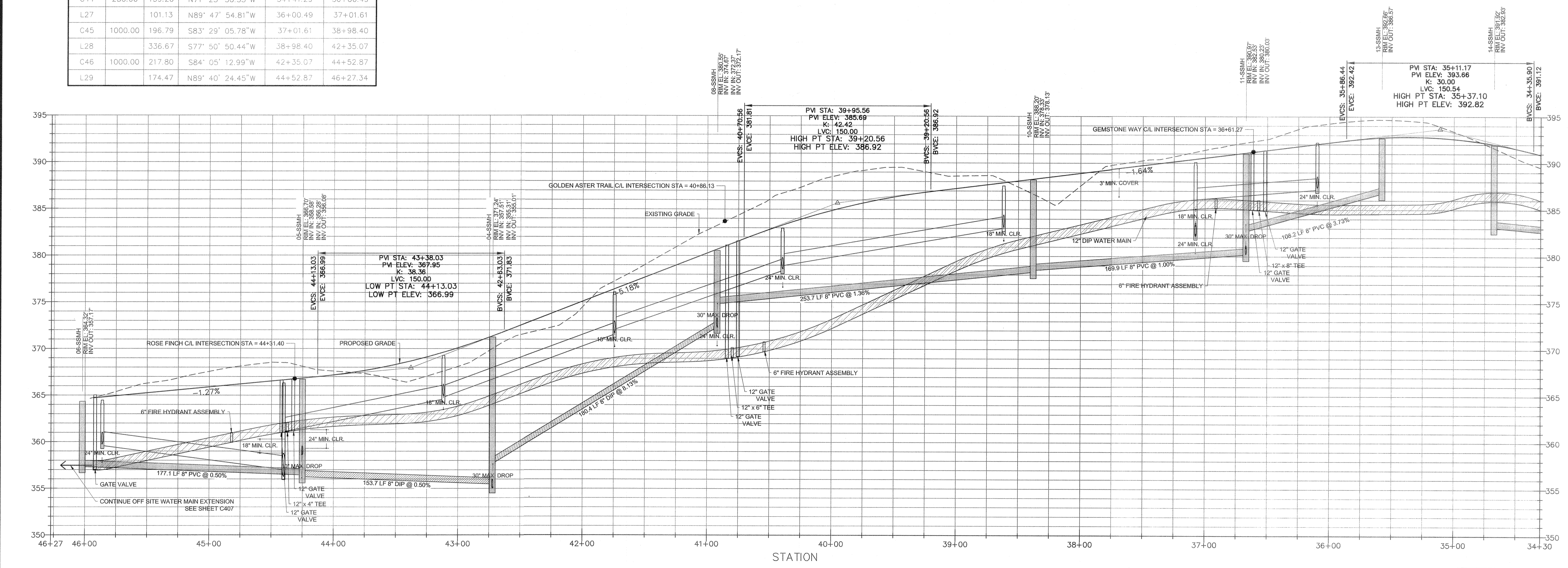
KAVANAUGH ROAD					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
C44	250.00	159.20	N71° 25' 50.35"W	34+41.29	36+00.49
L27		101.13	N89° 47' 54.81"W	36+00.49	37+01.61
C45	1000.00	196.79	S83° 29' 05.78"W	37+01.61	38+98.40
L28		336.67	S77° 50' 50.44"W	38+98.40	42+35.07
C46	1000.00	217.80	S84° 05' 12.99"W	42+35.07	44+52.87
L29		174.47	N89° 40' 24.45"W	44+52.87	46+27.34

**Public Water Distribution / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # **W-3594**  
 Authorization to Construct **[Signature]**  
 Date **4/23/19**

**Public Sewer Collection / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # **S-4523**  
 Authorization to Construct **[Signature]**  
 Date **4/23/19**

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
 Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.  
 Failure to call for inspection, install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.

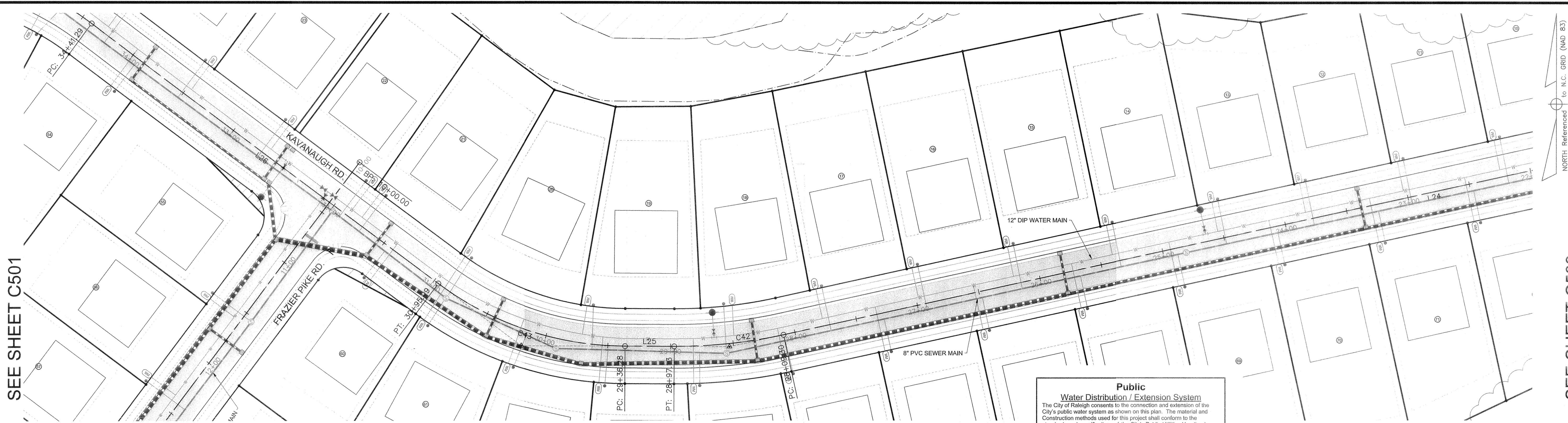
SEE SHEET C502



**KAVANAUGH RD - PROFILE**  
 HOR. SCALE: 1"=40' VER. SCALE: 1"=8'  
 STA: 34+30 - 46+27

REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~



SEE SHEET C501

SEE SHEET C503

**KAVANAUGH RD - PLAN**  
**SCALE: 1"=40'**  
**STA: 22+50 - 34+30**

KAVANAUGH ROAD					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
L22		91.51	S87° 40' 34.01"W	10+00.00	10+91.51
L23		425.34	N89° 03' 35.12"W	10+91.51	15+16.85
C41	1000.00	232.32	S84° 17' 05.60"W	15+16.85	17+49.16
L24		1060.14	S77° 37' 46.33"W	17+49.16	28+09.30
C42	400.00	87.83	S83° 55' 10.72"W	28+09.30	28+97.13
L25		39.15	N89° 47' 24.88"W	28+97.13	29+36.28
C43	250.00	159.71	N71° 29' 20.56"W	29+36.28	30+95.99
L26		345.31	N53° 11' 16.25"W	30+95.99	34+41.29

**Public**  
**Water Distribution / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh  
 Public Utilities Department Permit # **W-3599**  
 Authorization to Construct **Tim B. Cook**  
 Date **4/23/19**

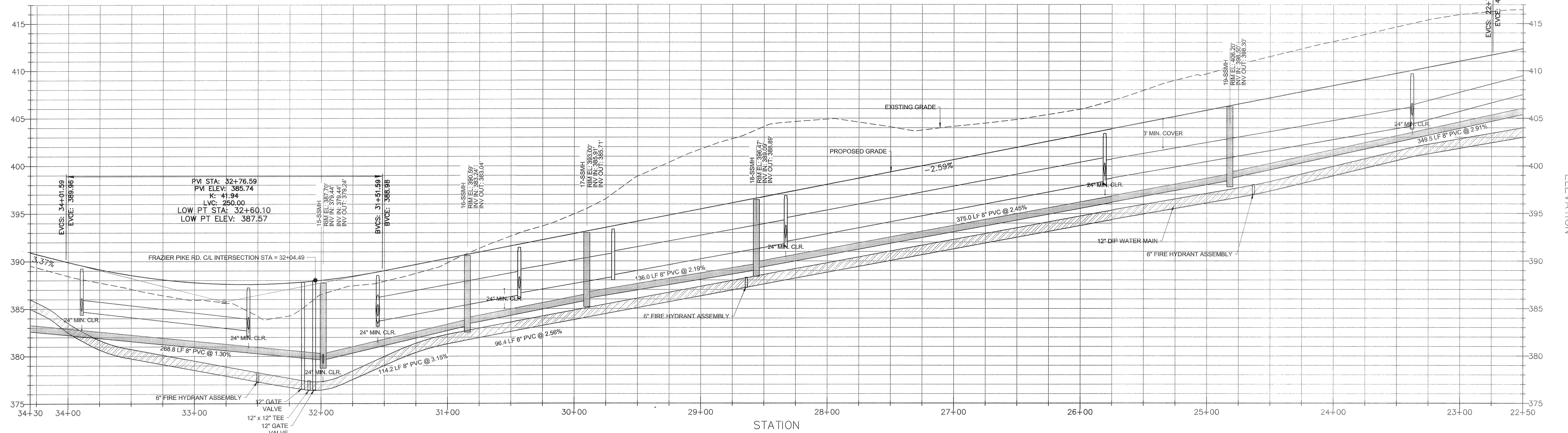
**Public**  
**Sewer Collection / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh  
 Public Utilities Department Permit # **S-4523**  
 Authorization to Construct **Tim B. Cook**  
 Date **4/23/19**

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.

**Failure** to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstatement of any water or sewer facilities not inspected as a result of this notification failure.

**Failure** to call for inspection, install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.



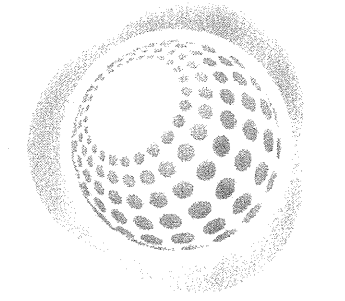
**KAVANAUGH RD - PROFILE**  
**HOR. SCALE: 1"=40' VER. SCALE: 1"=8'**  
**STA: 22+50 - 34+30**

REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~



**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2624 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378



**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**

1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

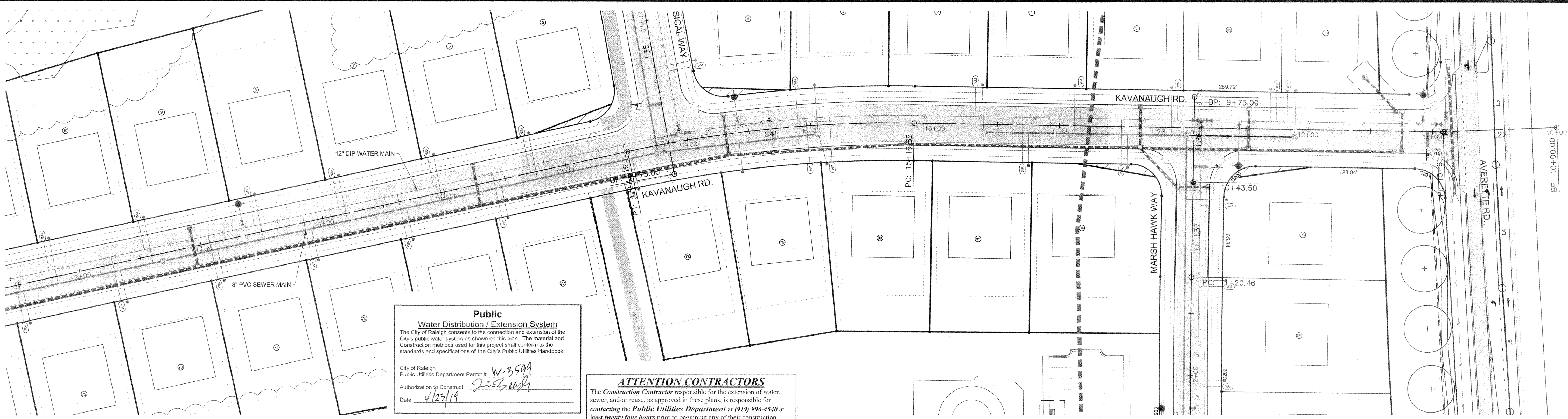
**PLAN AND PROFILE**  
**KAVANAUGH RD.**

Project Engineer: TSS  
 Designed By: MP  
 Drawn By: MP  
 Checked By: TSS  
 Scale: AS SHOWN  
 Date: 10/30/2018  
 Project Number: 170348

SHEET  
**C502**

ELIZABETH HEIGHTS

SEE SHEET C502



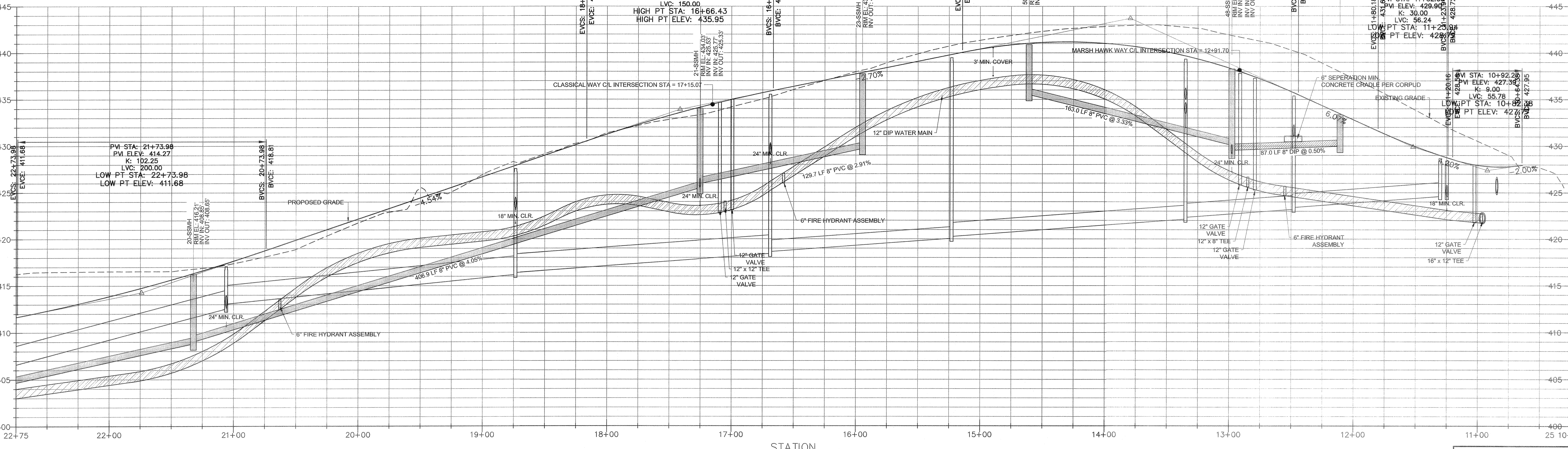
**Public Water Distribution / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # *W-3599*  
 Authorization to Construct *[Signature]*  
 Date *4/23/19*

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
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**Public Sewer Collection / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # *S-4523*  
 Authorization to Construct *[Signature]*  
 Date *4/23/19*

**KAVANAUGH RD - PLAN**  
 SCALE: 1"=40'  
 STA: 10+25 - 22+50

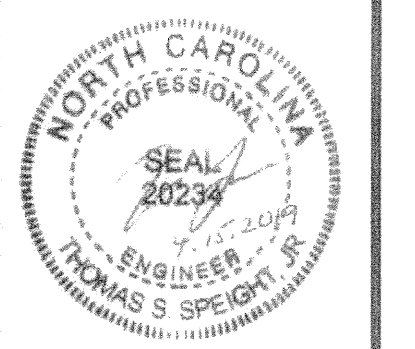
KAVANAUGH ROAD					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
L22		91.51	S87° 40' 34.01"W	10+00.00	10+91.51
L23		425.34	N89° 03' 35.12"W	10+91.51	15+16.85
C41	1000.00	232.32	S84° 17' 05.60"W	15+16.85	17+49.16
L24		1060.14	S77° 37' 46.33"W	17+49.16	28+09.30
C42	400.00	87.83	S83° 55' 10.72"W	28+09.30	28+97.13
L25		39.15	N89° 47' 24.88"W	28+97.13	29+36.28
C43	250.00	159.71	N71° 29' 20.56"W	29+36.28	30+95.99
L26		345.31	N53° 11' 16.25"W	30+95.99	34+41.29



**KAVANAUGH RD - PROFILE**  
 HOR. SCALE: 1"=40' VER. SCALE: 1"=8'  
 STA: 10+25 - 22+50

REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

PRELIMINARY  
 NOT RELEASED  
 FOR CONSTRUCTION



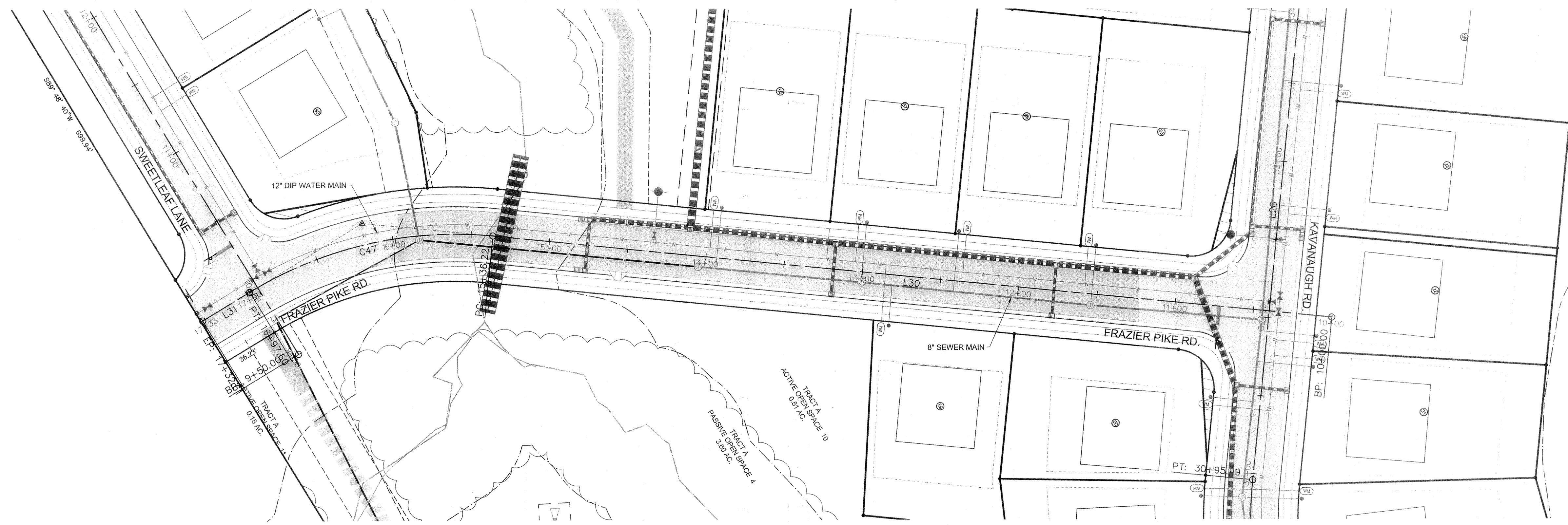
**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378

**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**PLAN AND PROFILE**  
**KAVANAUGH RD.**

Project Engineer:	ISS
Designed By:	MP
Drawn By:	MP
Checked By:	ISS
Scale:	AS SHOWN
Date:	10/30/2018
Project Number:	170348
SHEET	
<b>C503</b>	

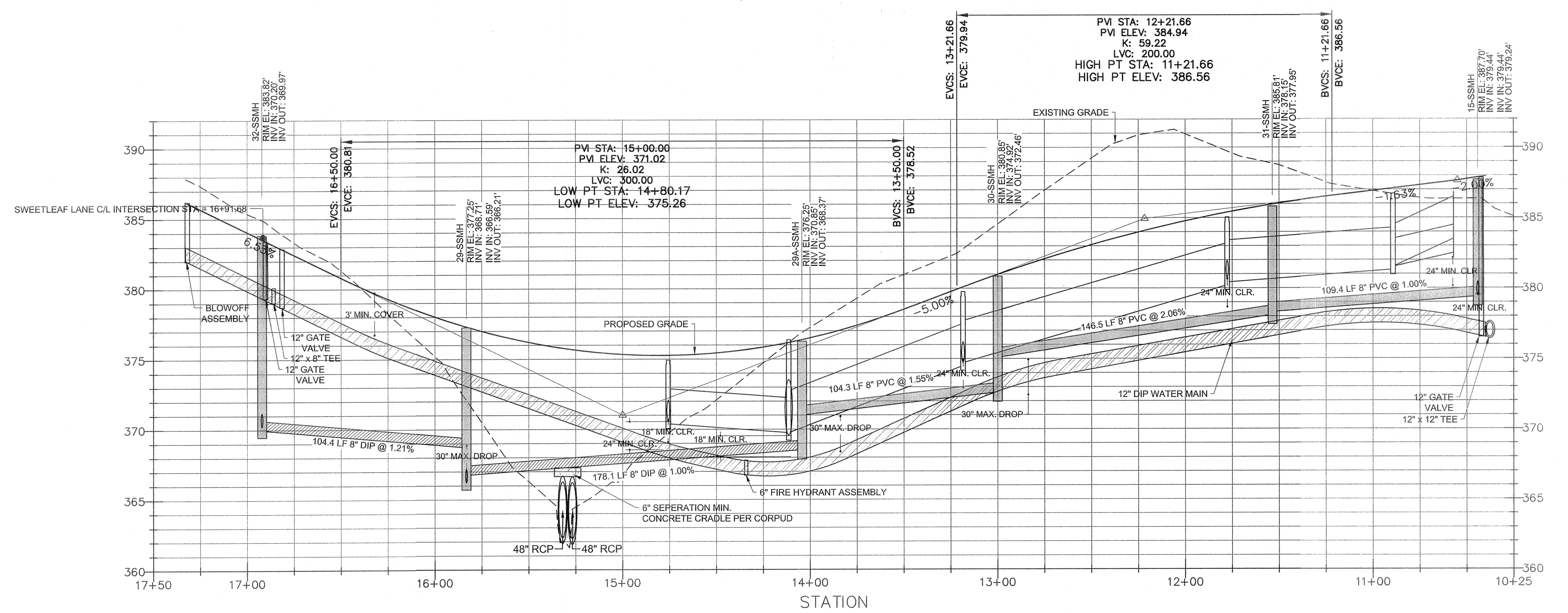
ELIZABETH HEIGHTS



FRAZIER PIKE RD - PLAN  
SCALE: 1"=40'  
STA: 10+25 - 17+33

NORTH Referenced to N.C. GRID (NAD 83)

FRAZIER PIKE ROAD					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
L30		536.22	S36° 48' 43.75"W	10+00.00	15+36.22
C47	250.00	161.38	S18° 19' 09.18"W	15+36.22	16+97.60
L31		35.02	S0° 10' 35.92"E	16+97.60	17+32.61



FRAZIER PIKE RD - PROFILE  
HOR. SCALE: 1"=40' VER. SCALE: 1"=8'  
STA: 10+25 - 17+33

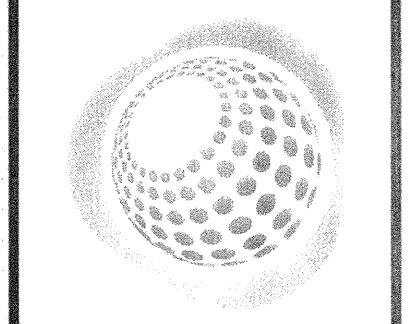
**Public**  
**Water Distribution / Extension System**  
The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh  
Public Utilities Department Permit # W-35494  
Authorization to Construct [Signature]  
Date 4/23/19

**Public**  
**Sewer Collection / Extension System**  
The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh  
Public Utilities Department Permit # S-4523  
Authorization to Construct [Signature]  
Date 4/23/19

**ATTENTION CONTRACTORS**  
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**Bateman Civil Survey Company**  
Engineers • Surveyors • Planners  
2524 Relliance Avenue, Apex, North Carolina 27539  
Phone: 919.577.1080 Fax: 919.577.1081  
NGBELS FIRM No. C-2378



**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**  
1205 AVERETTE ROAD  
WAKE FOREST, NC 27787  
WAKE COUNTY, NC

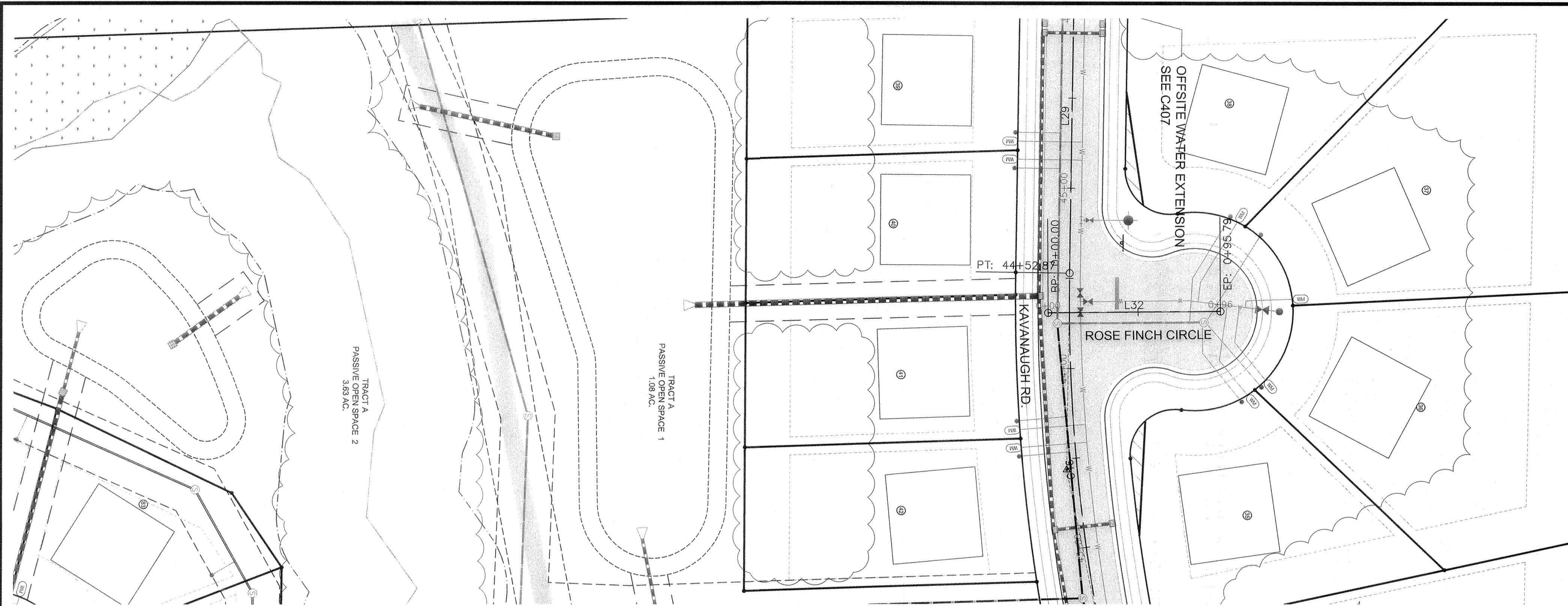
**PLAN AND PROFILE**  
**FRAZIER PIKE RD.**

Project Engineer: TSS  
Designed By: MP  
Drawn By: MP  
Checked By: TSS  
Scale: AS SHOWN  
Date: 10/30/2016  
Project Number: 170348

SHEET  
**C504**

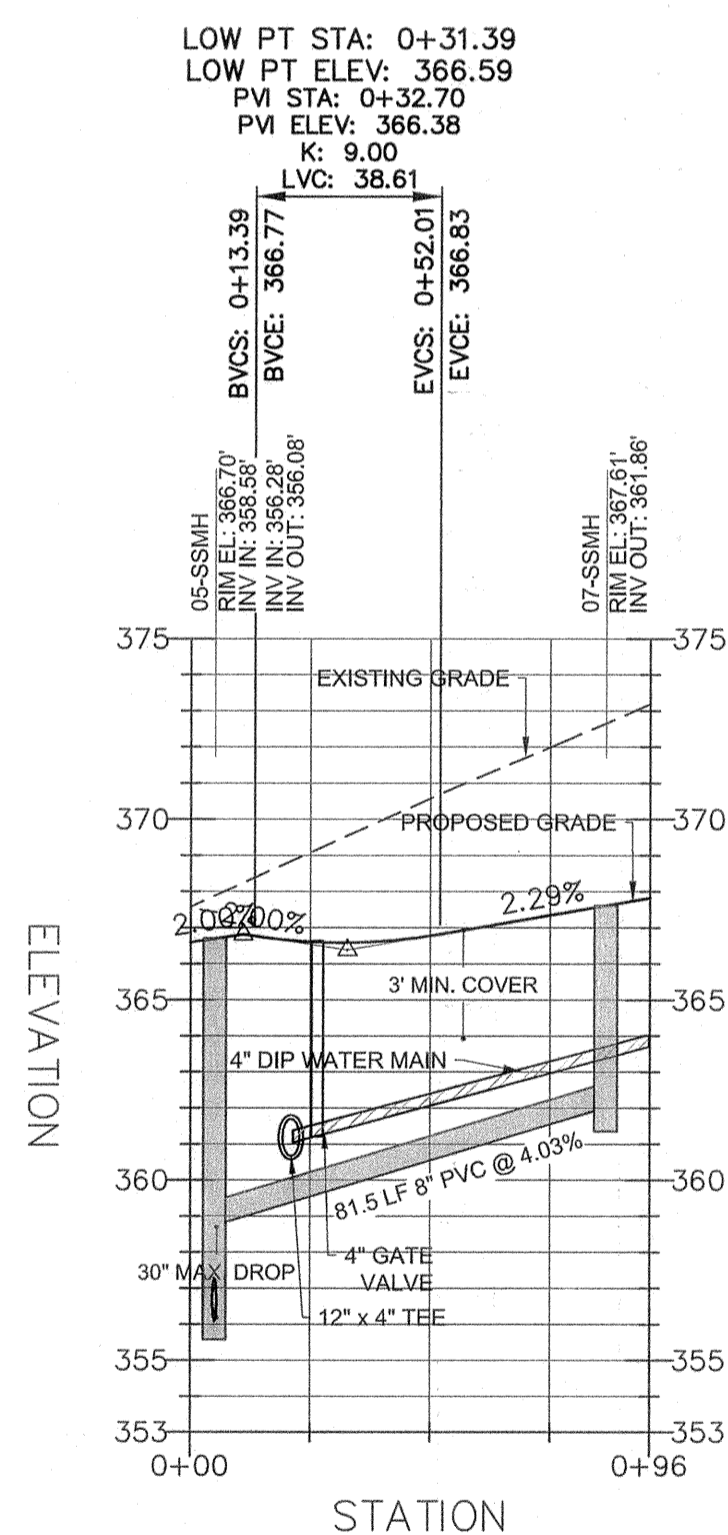
REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~

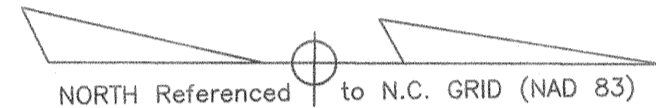


**ROSE FINCH CIRCLE - PLAN**  
**SCALE: 1"=40'**  
**STA: 0+00 - 0+96**

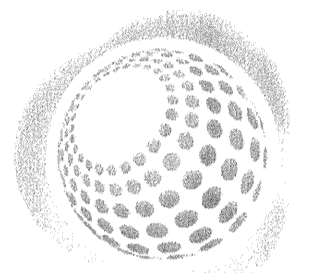
ROSE FINCH CIRCLE					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
L32		95.79	N0° 55' 32.50"W	0+00.00	0+95.79



**ROSE FINCH CIRCLE - PROFILE**  
**HOR. SCALE: 1"=40' VER. SCALE: 1"=8'**  
**STA: 0+00 - 0+96**



**Bateman Civil Survey Company**  
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 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378



**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**

1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**PLAN AND PROFILE**  
**ROSE FINCH CIRCLE**

Project Engineer: TSS  
 Designed By: MP  
 Drawn By: MP  
 Checked By: TSS  
 Scale: AS SHOWN

Date: 10/30/2018

Project Number: 170348

SHEET  
**C505**

**Public**  
**Water Distribution / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # W-3549  
 Authorization to Construct [Signature]  
 Date 4/23/19

**Public**  
**Sewer Collection / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # S-4523  
 Authorization to Construct [Signature]  
 Date 4/23/19

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty-four hours prior to beginning any of their construction.

**Failure** to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstatement of any water or sewer facilities not inspected as a result of this notification failure.

**Failure** to call for Inspection, Install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.

~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~

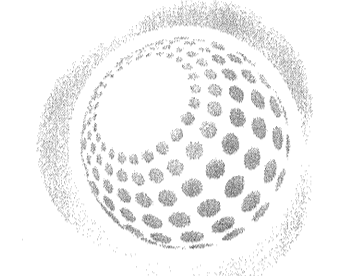
REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018
	REVISIONS	

ELIZABETH HEIGHTS





**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378

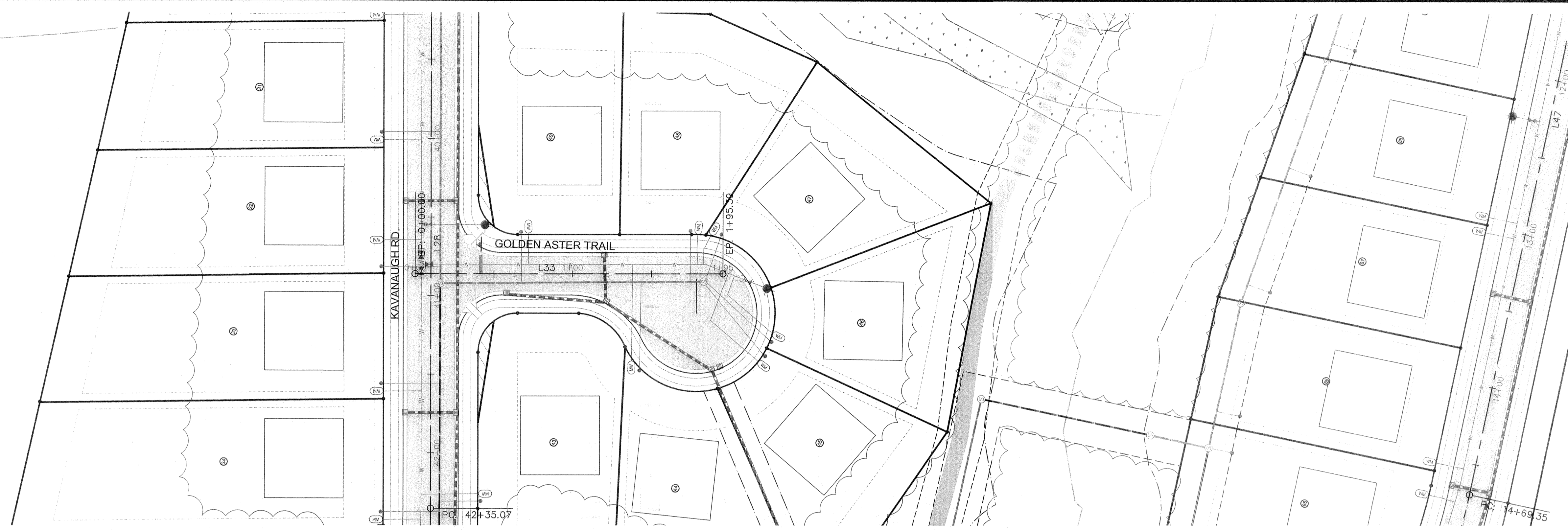


**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**PLAN AND PROFILE**  
**GOLDEN ASTER TRAIL**

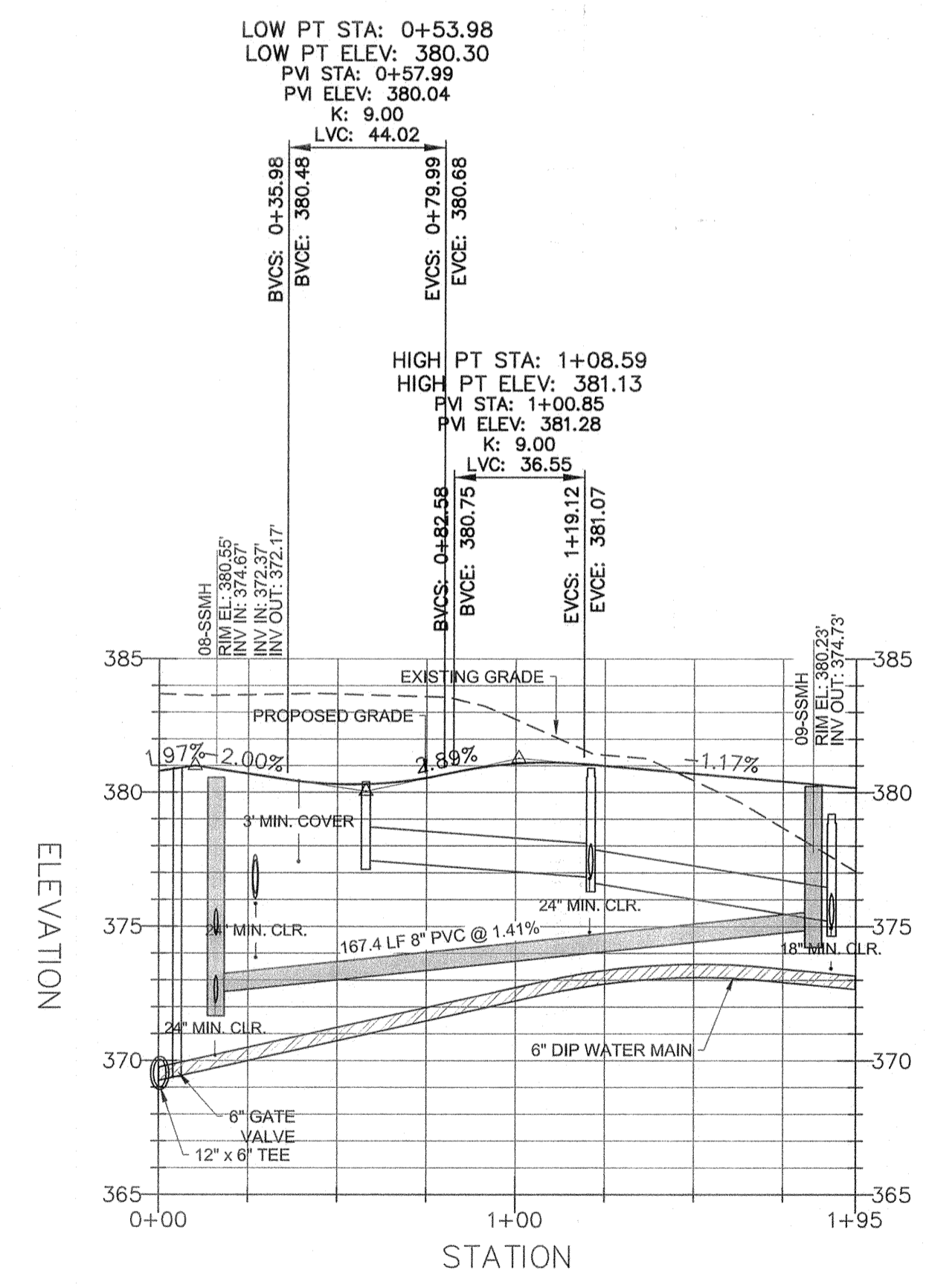
Project Engineer: TSS  
 Designed By: MP  
 Drawn By: MP  
 Checked By: TSS  
 Scale: AS SHOWN  
 Date: 10/30/2018  
 Project Number: 170348

SHEET  
**C506**



**GOLDEN ASTER TRAIL - PLAN**  
 SCALE: 1"=40'  
 STA: 0+00 - 1+95

GOLDEN ASTER TRAIL					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
L33		195.39	S12° 09' 09.56"E	0+00.00	1+95.39



**GOLDEN ASTER TRAIL - PROFILE**  
 HOR. SCALE: 1"=40' VER. SCALE: 1"=8'  
 STA: 0+00 - 1+95

**Public**  
**Water Distribution / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # *W-3594*  
 Authorization to Construct *[Signature]*  
 Date *4/23/14*

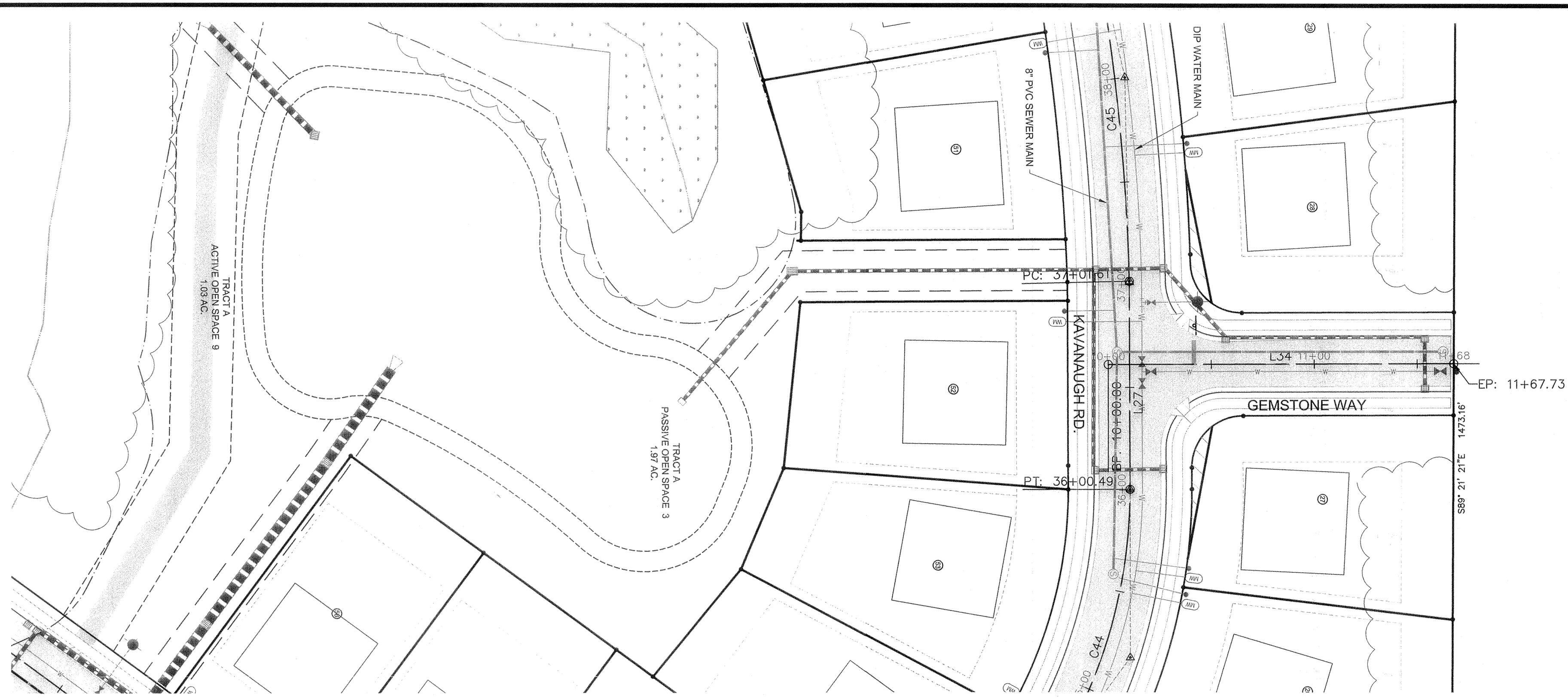
**Public**  
**Sewer Collection / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # *S-4523*  
 Authorization to Construct *[Signature]*  
 Date *4/23/14*

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
 Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.  
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~~PRELIMINARY~~  
~~NOT RELEASED~~  
 FOR CONSTRUCTION

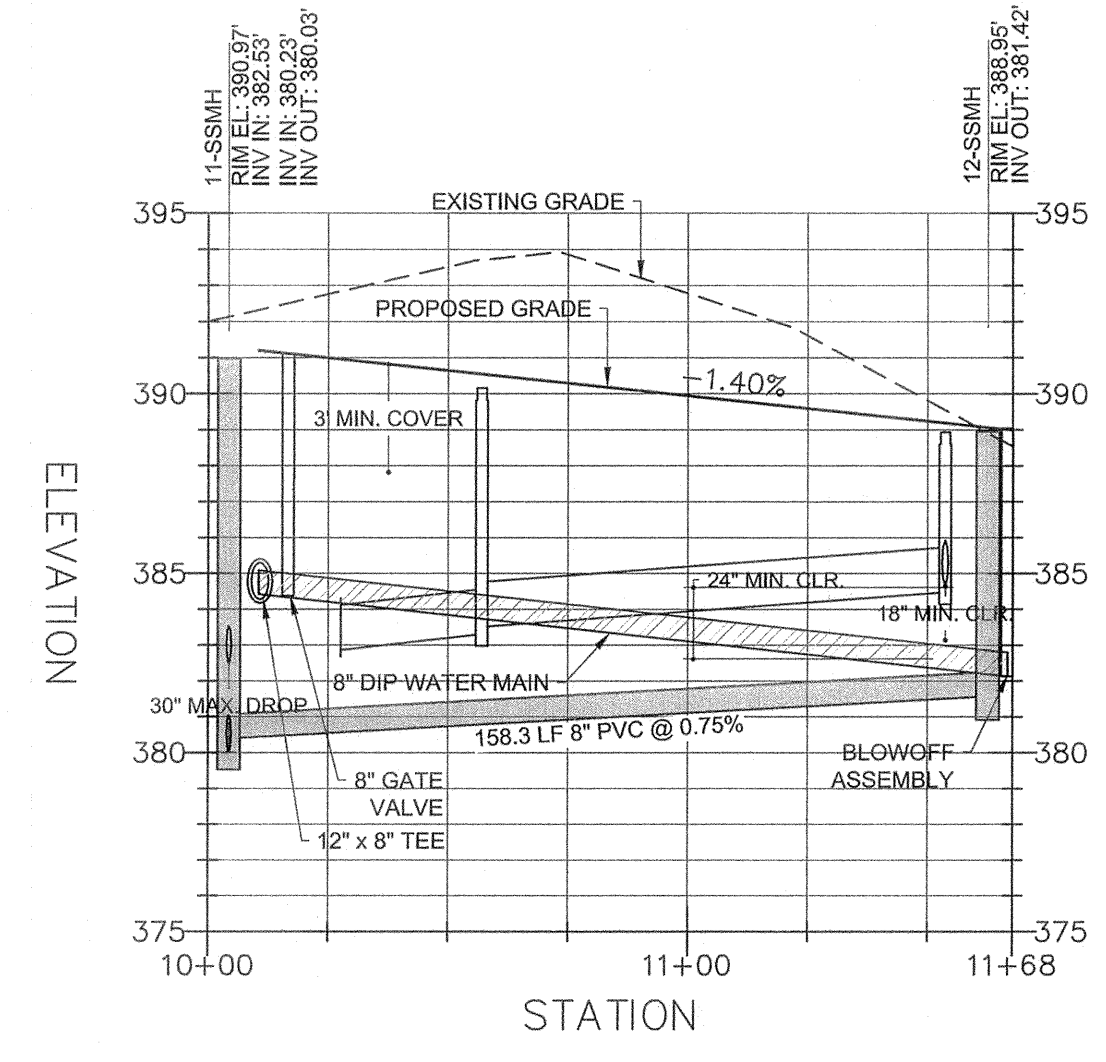
REV. NO.	REVISIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

ELIZABETH HEIGHTS

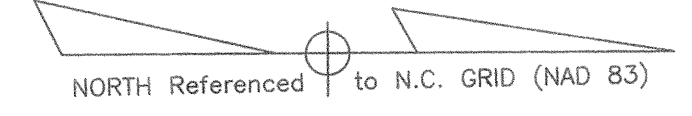


**GEMSTONE WAY - PLAN**  
**SCALE: 1"=40'**  
**STA: 10+00 - 11+68**

GEMSTONE WAY					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
L34		167.73	N0° 21' 13.83"E	10+00.00	11+67.73



**GEMSTONE WAY - PROFILE**  
**HOR. SCALE: 1"=40' VER. SCALE: 1"=8'**  
**STA: 10+00 - 11+68**



REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018
	REVISIONS	

**Public**  
**Water Distribution / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # W-3549  
 Authorization to Construct [Signature]  
 Date 4/23/19

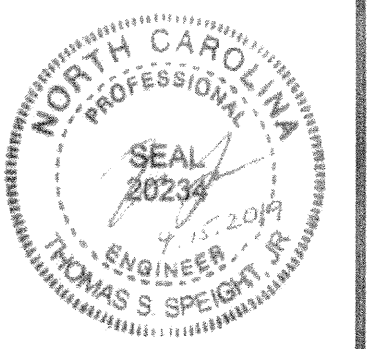
**Public**  
**Sewer Collection / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # S-4583  
 Authorization to Construct [Signature]  
 Date 4/23/19

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at 919-996-4540 at least twenty four hours prior to beginning any of their construction.

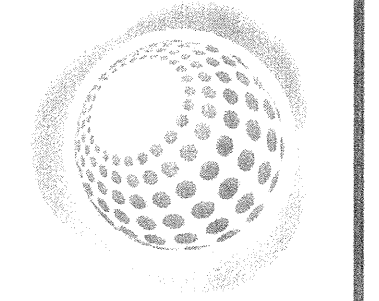
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~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~



**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2504 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378



**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**PLAN AND PROFILE**  
**GEMSTONE WAY**

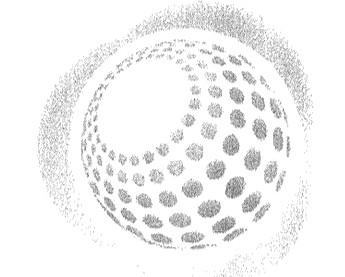
Project Engineer: TSS  
 Designed By: MP  
 Drawn By: MP  
 Checked By: TSS  
 Scale: AS SHOWN  
 Date: 10/30/2018  
 Project Number: 170348

SHEET  
**C507**

ELIZABETH HEIGHTS



**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378

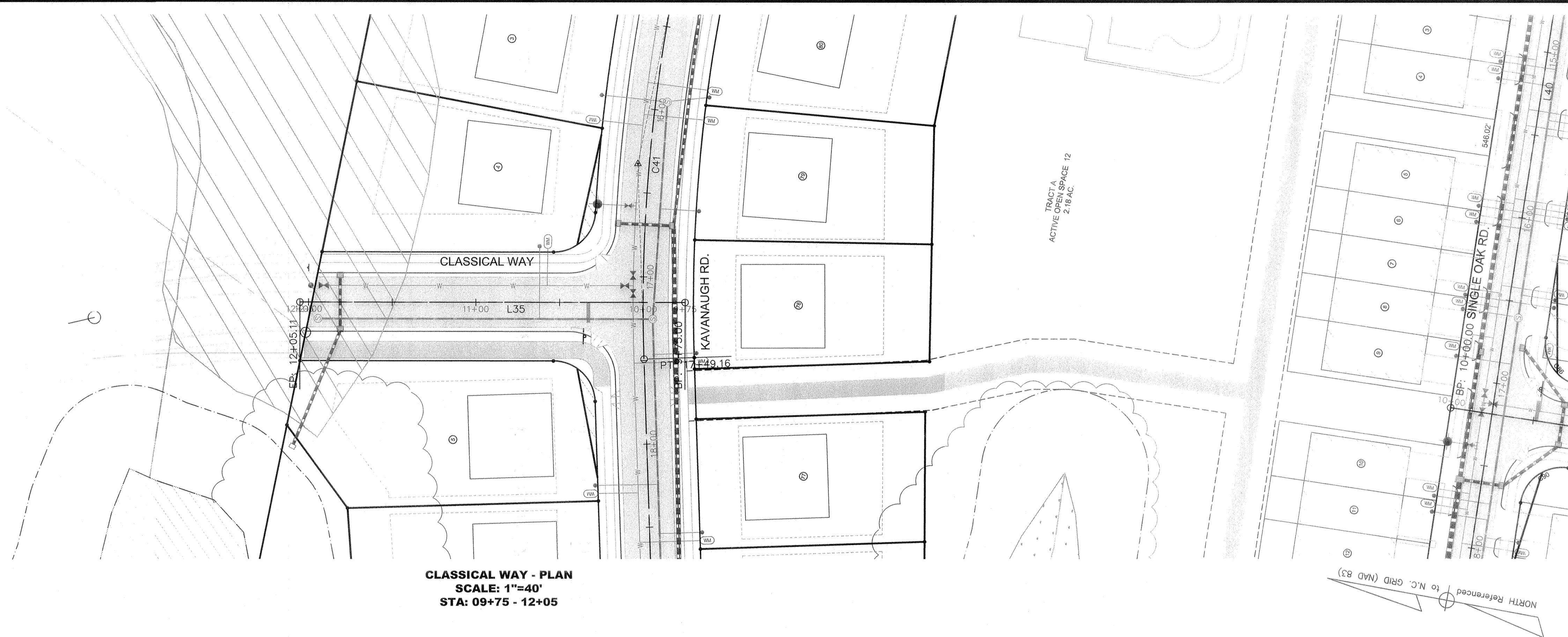


**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**PLAN AND PROFILE**  
**CLASSICAL WAY**

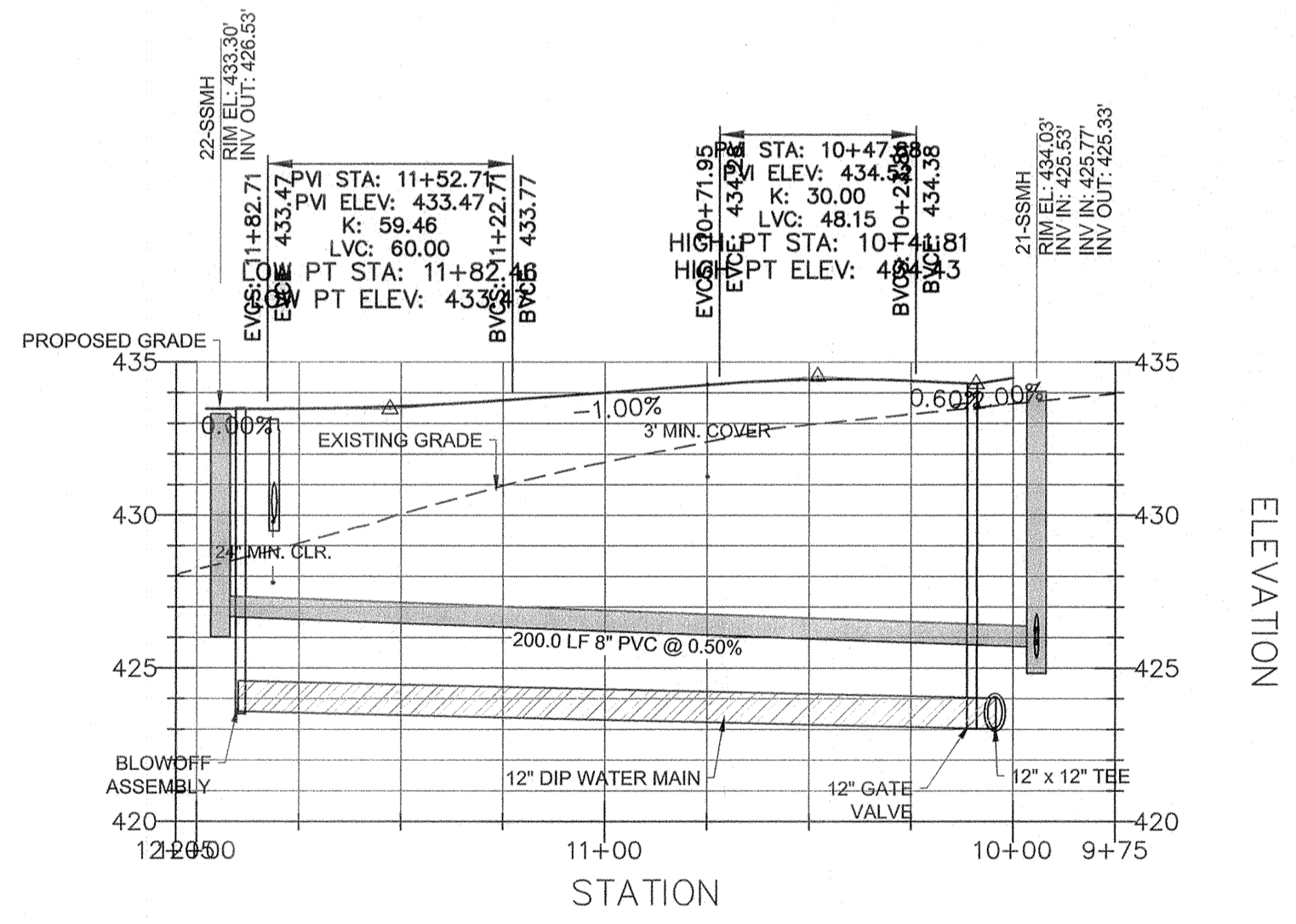
Project Engineer: TSS  
 Designed By: MP  
 Drawn By: MP  
 Checked By: TSS  
 Scale: AS SHOWN  
 Date: 10/30/2018  
 Project Number: 170348

SHEET  
**C508**



**CLASSICAL WAY - PLAN**  
 SCALE: 1"=40'  
 STA: 09+75 - 12+05

CLASSICAL WAY					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
L35		230.11	N10° 26' 45.70"W	9+75.00	12+05.11



**CLASSICAL WAY - PROFILE**  
 HOR. SCALE: 1"=40' VER. SCALE: 1"=8'  
 STA: 09+75 - 12+05

**Public**  
**Water Distribution / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # W-3599  
 Authorization to Construct [Signature]  
 Date 4/23/19

**Public**  
**Sewer Collection / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # S-4523  
 Authorization to Construct [Signature]  
 Date 4/23/19

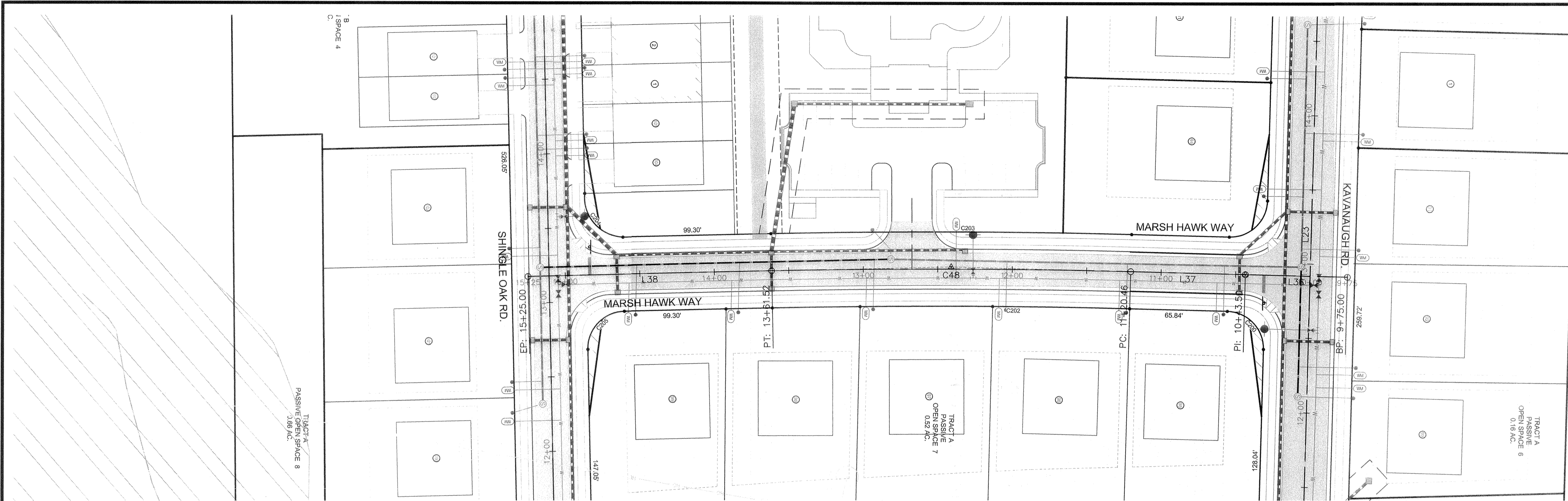
**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty-four hours prior to beginning any of their construction.

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**PRELIMINARY**  
~~NOT RELEASED~~  
 FOR CONSTRUCTION

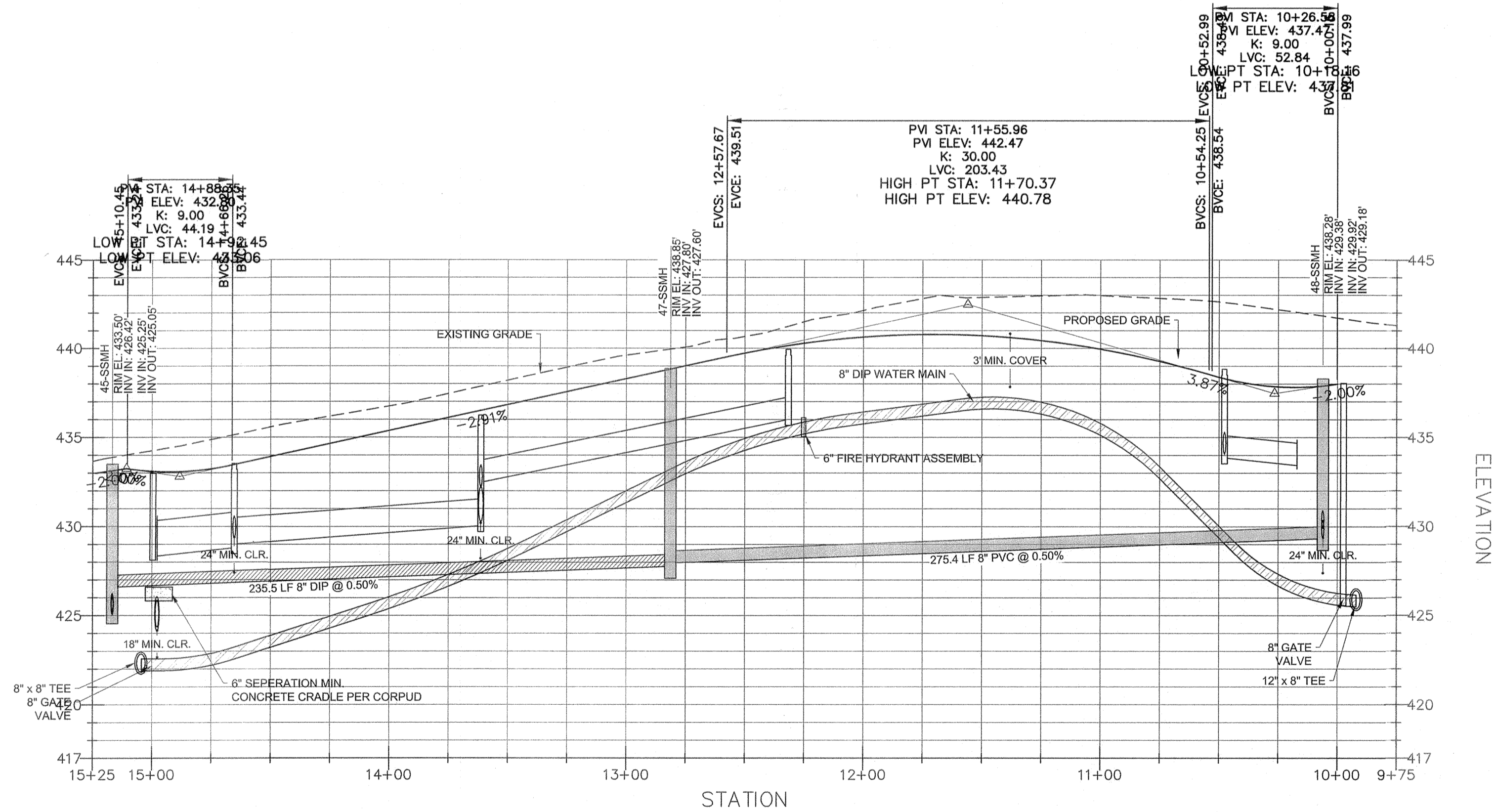
REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

ELIZABETH HEIGHTS

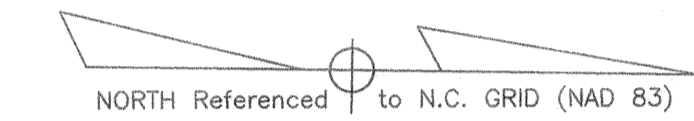


**MARSH HAWK WAY - PLAN**  
**SCALE: 1"=40'**  
**STA: 09+75 - 15+25**

MARSH HAWK WAY					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
L36		68.50	S0° 56' 24.88"W	9+75.00	10+43.50
L37		76.96	S0° 56' 24.88"W	10+43.50	11+20.46
C48	5000.00	241.06	S0° 26' 27.43"E	11+20.46	13+61.52
L38		163.48	S1° 49' 19.73"E	13+61.52	15+25.00



**MARSH HAWK WAY - PROFILE**  
**HOR. SCALE: 1"=40' VER. SCALE: 1"=8'**  
**STA: 09+75 - 15+25**



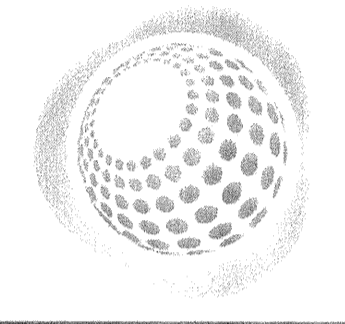
**Public Water Distribution / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # *N-3599*  
 Authorization to Construct *[Signature]*  
 Date *4/23/19*

**Public Sewer Collection / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # *S-4523*  
 Authorization to Construct *[Signature]*  
 Date *4/23/19*

**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
 Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.  
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**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378



**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**PLAN AND PROFILE**  
**MARSH HAWK WAY**

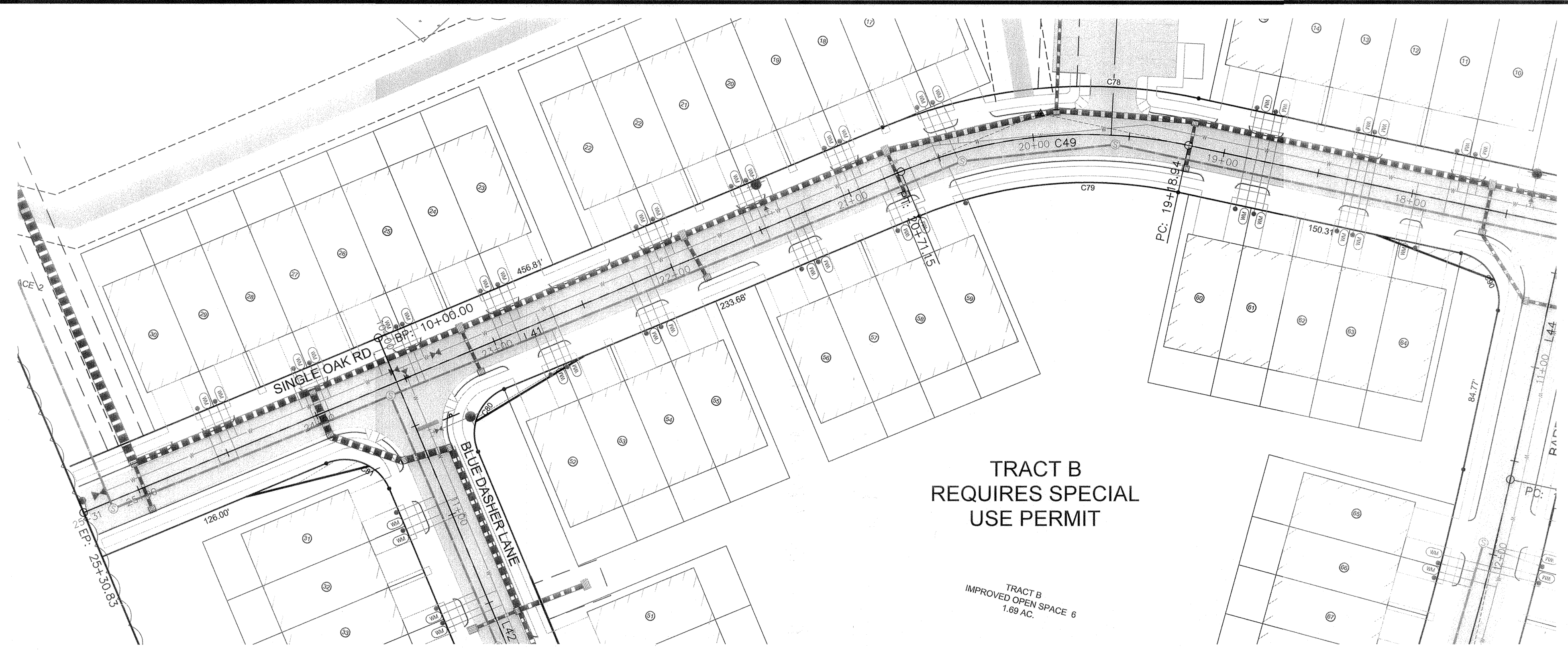
Project Engineer: TSS  
 Designed By: MP  
 Drawn By: MP  
 Checked By: TSS  
 Scale: AS SHOWN  
 Date: 10/30/2018  
 Project Number: 170348

~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~

SHEET  
**C509**

REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

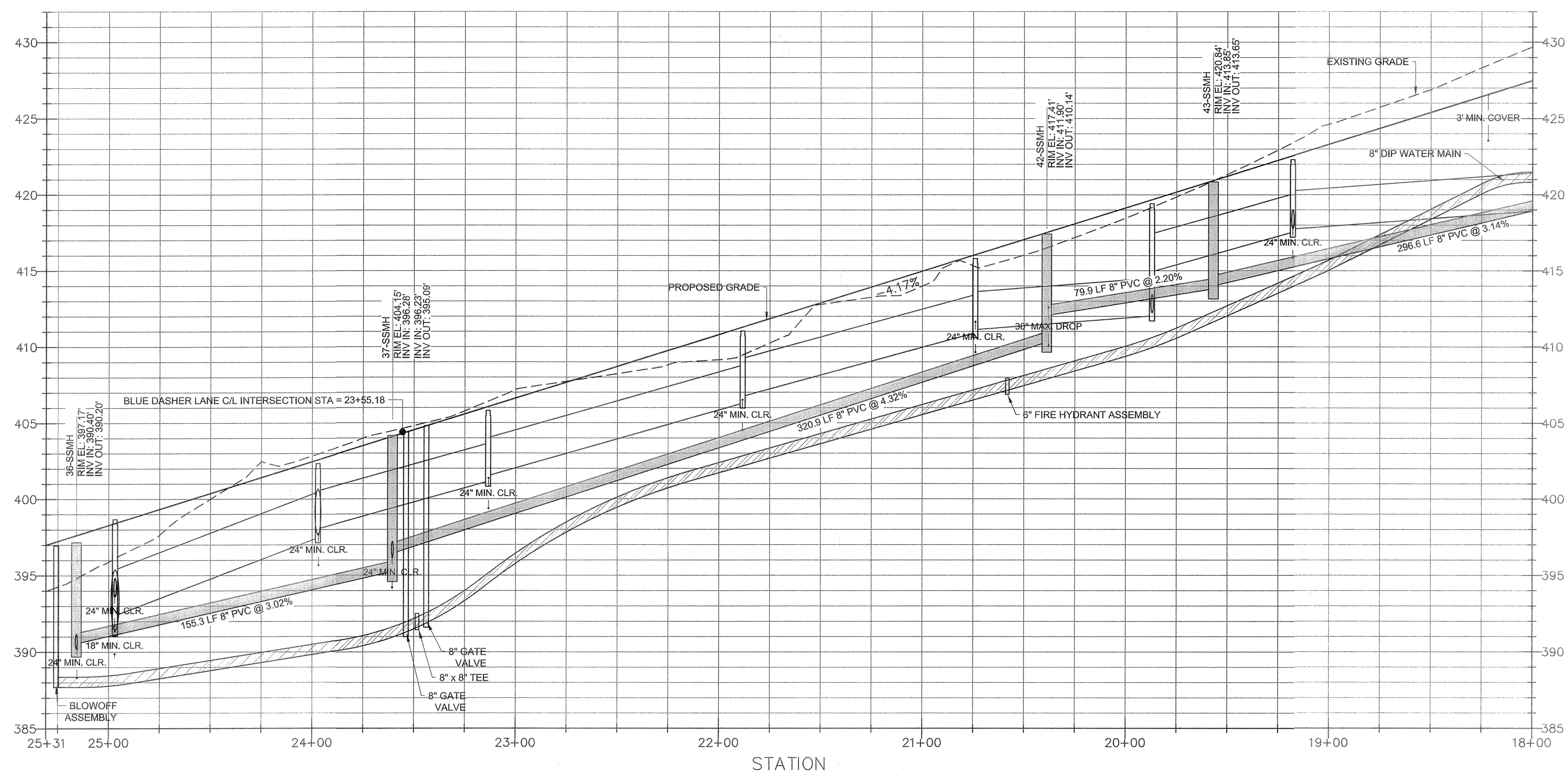
ELIZABETH HEIGHTS



**SINGLE OAK RD. - PLAN**  
**SCALE: 1"=40'**  
**STA: 18+00 - 25+31**

SINGLE OAK ROAD					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
L39		90.62	S86° 10' 11.26"W	10+00.00	10+90.62
C50	200.00	7.01	S87° 10' 25.76"W	10+90.62	10+97.63
L40		821.31	S88° 10' 40.27"W	10+97.63	19+18.94
C49	250.00	152.21	S70° 44' 08.37"W	19+18.94	20+71.15
L41		459.68	S53° 17' 36.47"W	20+71.15	25+30.83

SEE SHEET C511



**SINGLE OAK RD. - PROFILE**  
**HOR. SCALE: 1"=40' VER. SCALE: 1"=8'**  
**STA: 18+00 - 25+31**

**Public Water Distribution / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # W-3599  
 Authorization to Construct [Signature]  
 Date 4/23/19

**Public Sewer Collection / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # S-4523  
 Authorization to Construct [Signature]  
 Date 4/23/19

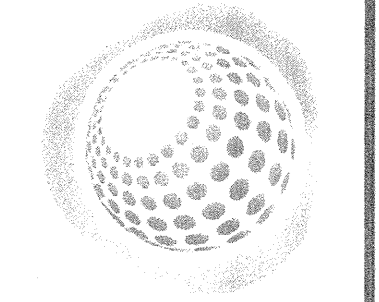
**ATTENTION CONTRACTORS**  
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the **Public Utilities Department** at (919) 996-4540 at least **twenty four hours** prior to beginning any of their construction.  
 Failure to notify both City Departments in advance of beginning construction, will result in the issuance of **monetary fines**, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.  
 Failure to call for Inspection, Install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a **Fine and Possible Exclusion** from future work in the City of Raleigh.

~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~

REV. NO.	REVISIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2016



**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378



**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**PLAN AND PROFILE**  
**SHINGLE OAK RD.**

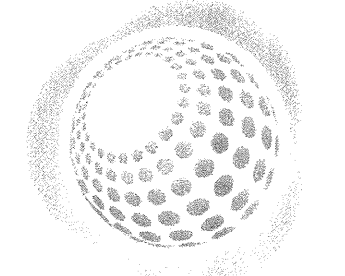
Project Engineer: TSS  
 Designed By: MP  
 Drawn By: MP  
 Checked By: TSS  
 Scale: AS SHOWN  
 Date: 10/30/2016  
 Project Number: 170348

SHEET  
**C510**

ELIZABETH HEIGHTS



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 Engineers • Surveyors • Planners  
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 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378



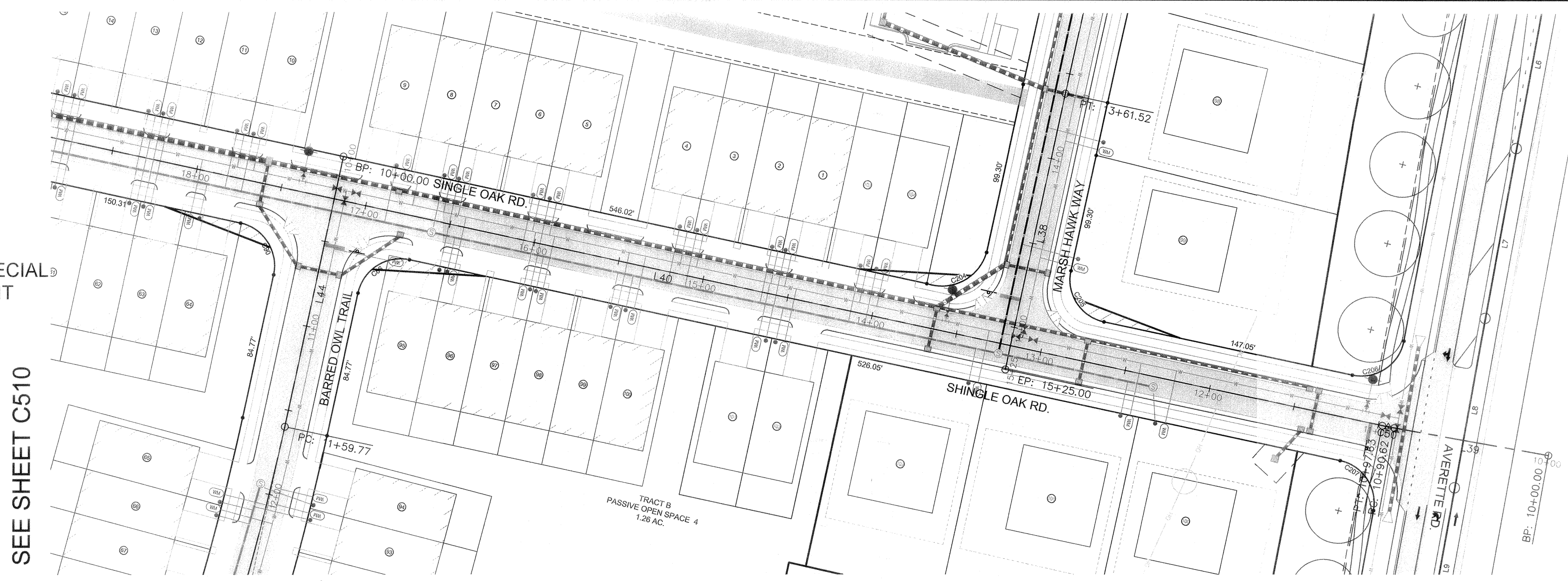
**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**PLAN AND PROFILE**  
**SHINGLE OAK RD.**

Project Engineer: TSS  
 Designed By: MP  
 Drawn By: MP  
 Checked By: TSS  
 Scale: AS SHOWN  
 Date: 10/30/2018  
 Project Number: 170348

SHEET  
**C511**

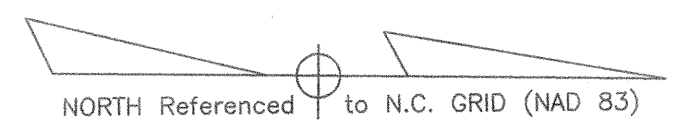
ELIZABETH HEIGHTS



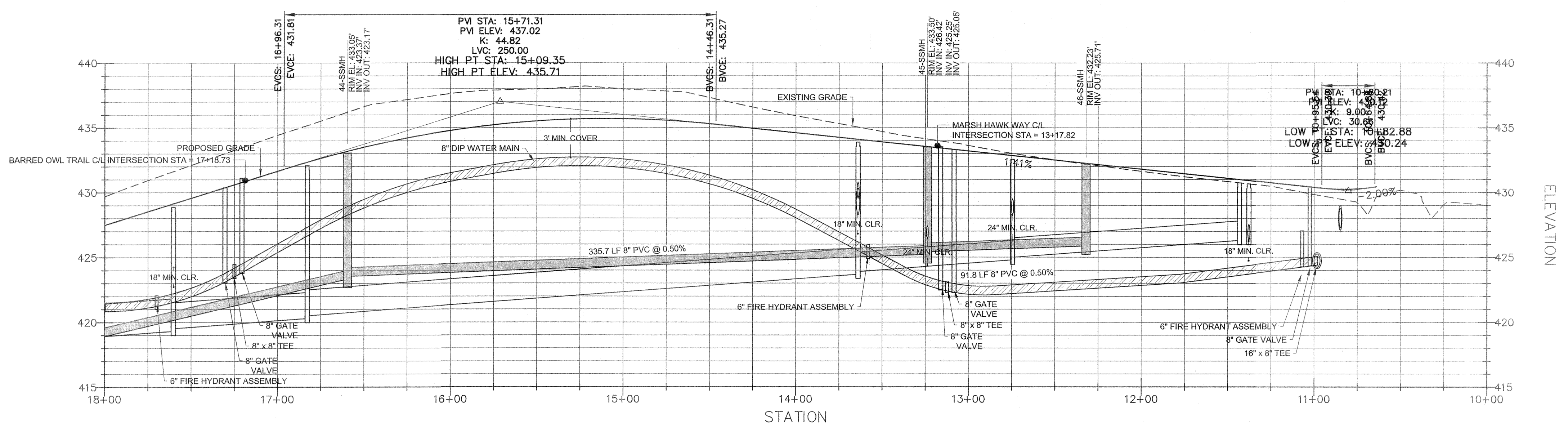
**SINGLE OAK RD. - PLAN**  
 SCALE: 1"=40'  
 STA: 10+00 - 18+00

TRACT B  
 REQUIRES SPECIAL  
 USE PERMIT

SEE SHEET C510



SINGLE OAK ROAD					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
L39		90.62	S86° 10' 11.26"W	10+00.00	10+90.62
C50	200.00	7.01	S87° 10' 25.76"W	10+90.62	10+97.63
L40		821.31	S88° 10' 40.27"W	10+97.63	19+18.94
C49	250.00	152.21	S70° 44' 08.37"W	19+18.94	20+71.15
L41		459.68	S53° 17' 36.47"W	20+71.15	25+30.83



**SINGLE OAK RD. - PROFILE**  
 HOR. SCALE: 1"=40' VER. SCALE: 1"=8'  
 STA: 10+00 - 18+00

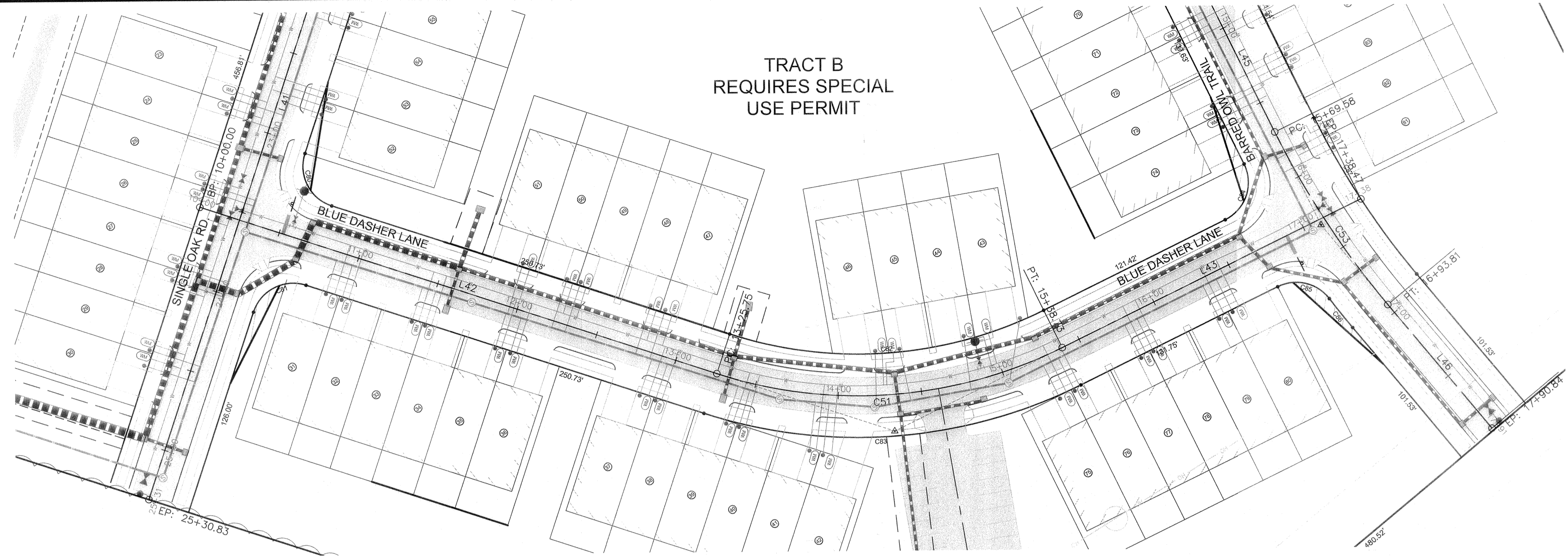
**Public**  
**Water Distribution / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # W-3599  
 Authorization to Construct: [Signature]  
 Date: 4/23/19

**Public**  
**Sewer Collection / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # S-4523  
 Authorization to Construct: [Signature]  
 Date: 4/23/19

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~~PRELIMINARY~~  
~~NOT RELEASED~~  
 FOR CONSTRUCTION

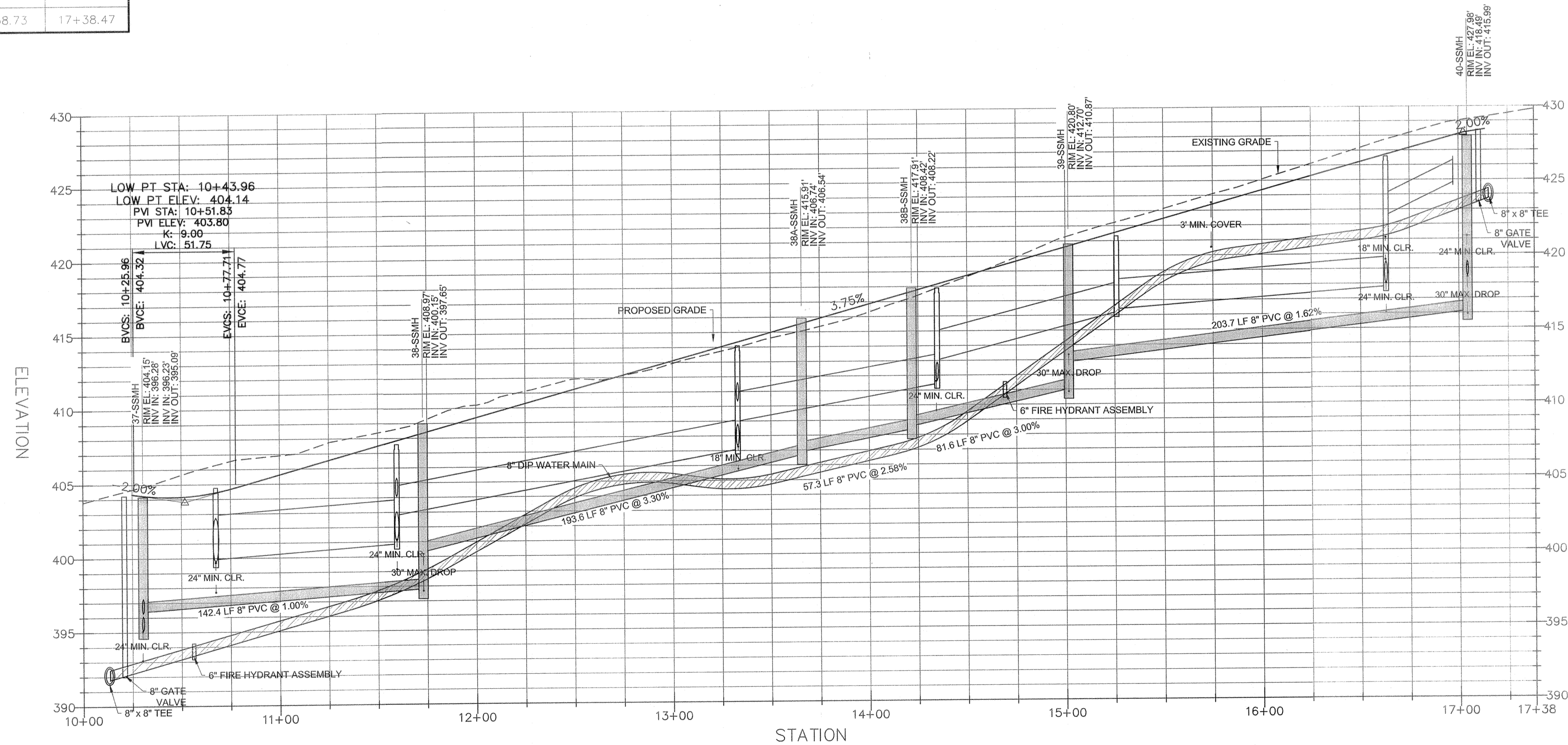
REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018
	REVISIONS	



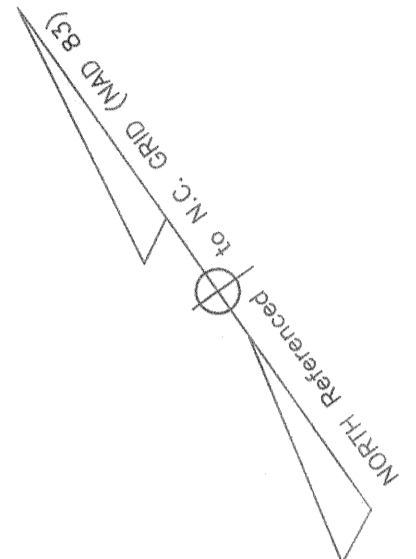
TRACT B  
REQUIRES SPECIAL  
USE PERMIT

BLUE DASHER LANE - PLAN  
SCALE: 1"=40'  
STA: 10+00 - 17+38

BLUE DASHER LANE					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
L42		325.75	S36° 42' 23.59"E	10+00.00	13+25.75
C51	275.00	212.98	S58° 53' 35.14"E	13+25.75	15+38.73
L43		199.74	S81° 04' 46.69"E	15+38.73	17+38.47



BLUE DASHER LANE - PROFILE  
HOR. SCALE: 1"=40' VER. SCALE: 1"=8'  
STA: 10+00 - 17+38



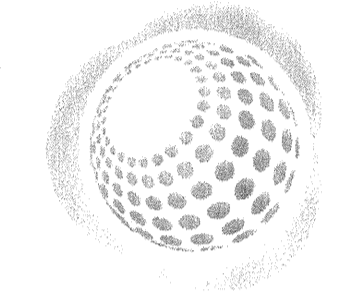
**Public**  
**Water Distribution / Extension System**  
The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh  
Public Utilities Department Permit # W-3599  
Authorization to Construct [Signature]  
Date 4/23/19

**Public**  
**Sewer Collection / Extension System**  
The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh  
Public Utilities Department Permit # S-4523  
Authorization to Construct [Signature]  
Date 4/23/19

**ATTENTION CONTRACTORS**  
The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.  
**Failure** to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.  
**Failure** to call for Inspection, Install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.



**Bateman Civil Survey Company**  
Engineers • Surveyors • Planners  
2524 Ralliance Avenue, Apex, North Carolina 27539  
Phone: 919.577.1080 Fax: 919.577.1081  
NCBELS FIRM No. C-2378



ELIZABETH HEIGHTS  
CONSTRUCTION DRAWINGS  
1205 AVERETTE ROAD  
WAKE FOREST, NC 27587  
WAKE COUNTY, NC

PLAN AND PROFILE  
BLUE DASHER LANE

Project Engineer: TSS  
Designed By: MP  
Drawn By: MP  
Checked By: TSS  
Scale: AS SHOWN

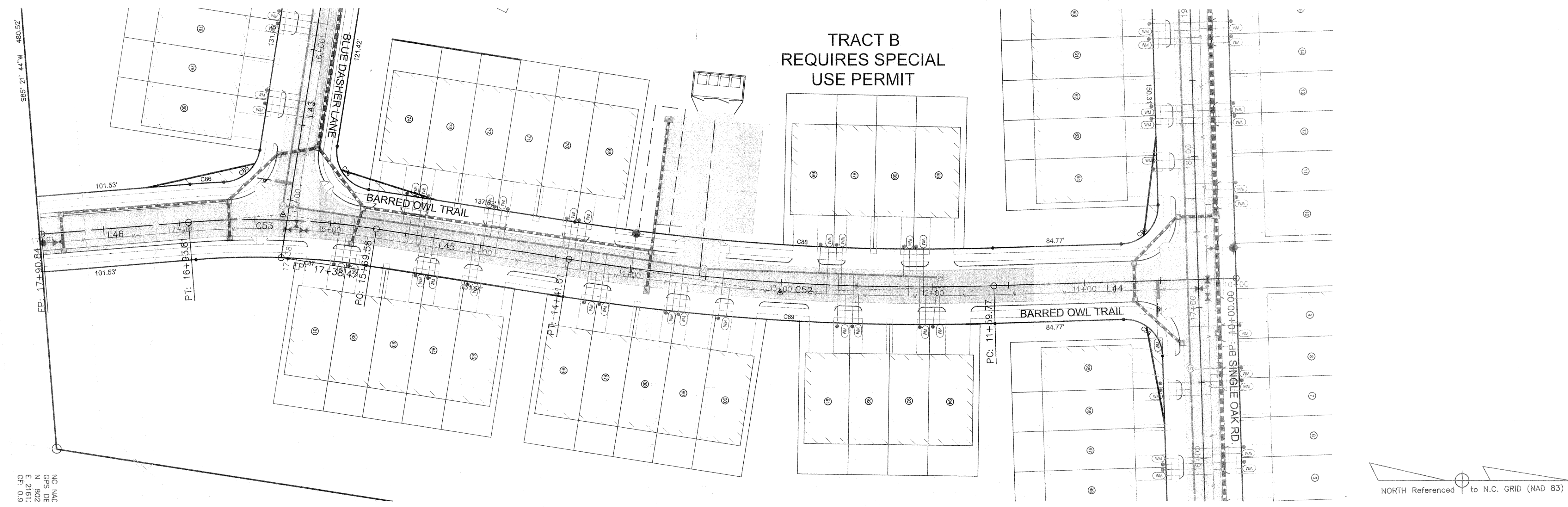
Date: 10/30/2018  
Project Number: 170348

SHEET  
**C512**

REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

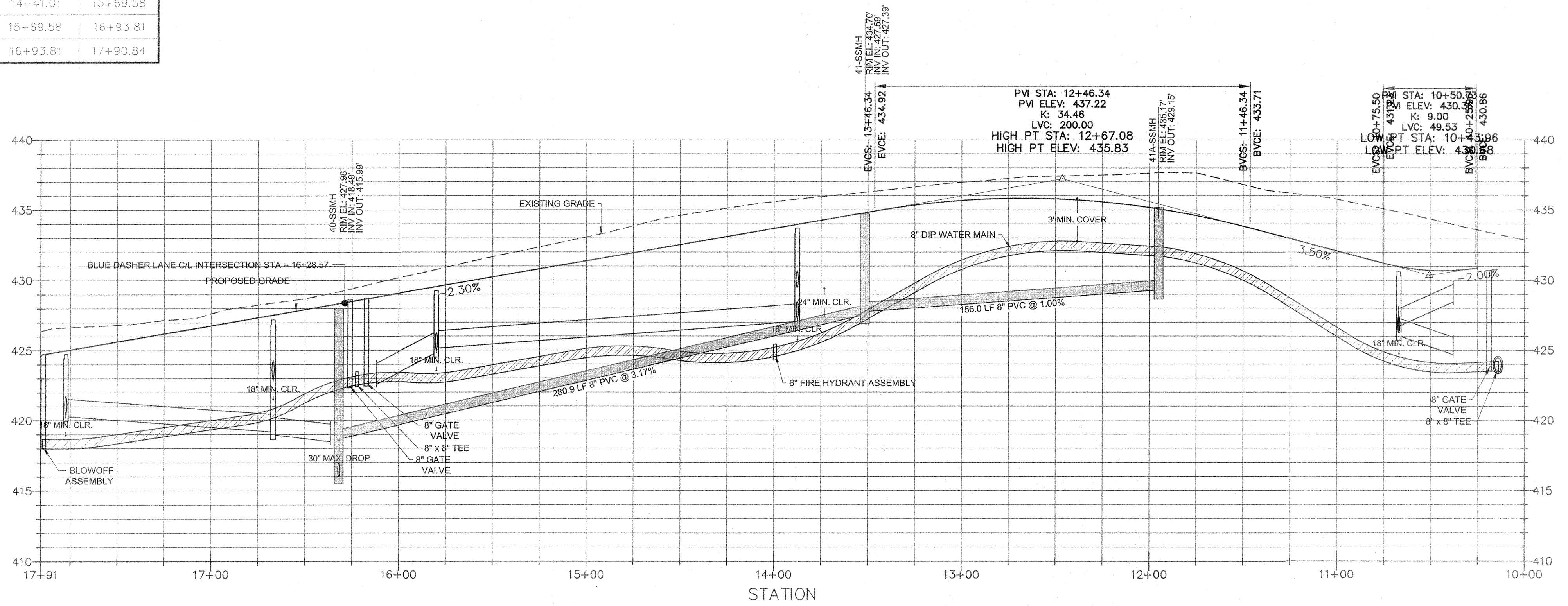
~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~

ELIZABETH HEIGHTS



**BARRED OWL TRAIL - PLAN**  
**SCALE: 1"=40'**  
**STA: 10+00 - 17+91**

BARRED OWL TRAIL					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
L44		159.77	S1° 49' 19.73"E	10+00.00	11+59.77
C52	1500.00	281.24	S3° 32' 56.79"W	11+59.77	14+41.01
L45		128.56	S8° 55' 13.31"W	14+41.01	15+69.58
C53	525.00	124.23	S2° 08' 28.47"W	15+69.58	16+93.81
L46		97.03	S4° 38' 16.37"E	16+93.81	17+90.84

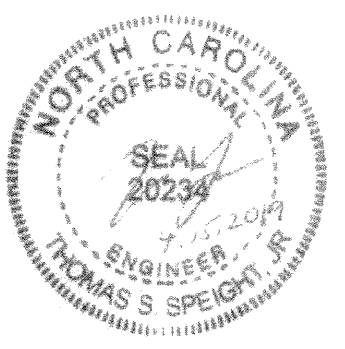


**BARRED OWL TRAIL - PROFILE**  
**HOR. SCALE: 1"=40' VER. SCALE: 1"=8'**  
**STA: 10+00 - 17+91**

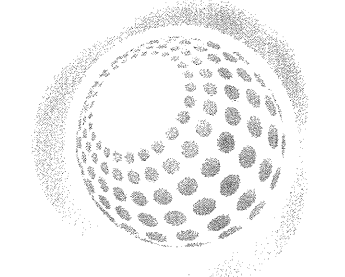
**Public**  
**Water Distribution / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # W-3599  
 Authorization to Construct [Signature]  
 Date 4/23/19

**Public**  
**Sewer Collection / Extension System**  
 The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
 City of Raleigh  
 Public Utilities Department Permit # S-4523  
 Authorization to Construct [Signature]  
 Date 4/23/19

**ATTENTION CONTRACTORS**  
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 Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.  
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 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378



**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**PLAN AND PROFILE**  
**BARRED OWL TRAIL**

Project Engineer: TSS  
 Designed By: MP  
 Drawn By: MP  
 Checked By: TSS  
 Scale: AS SHOWN  
 Date: 10/30/2018  
 Project Number: 170348

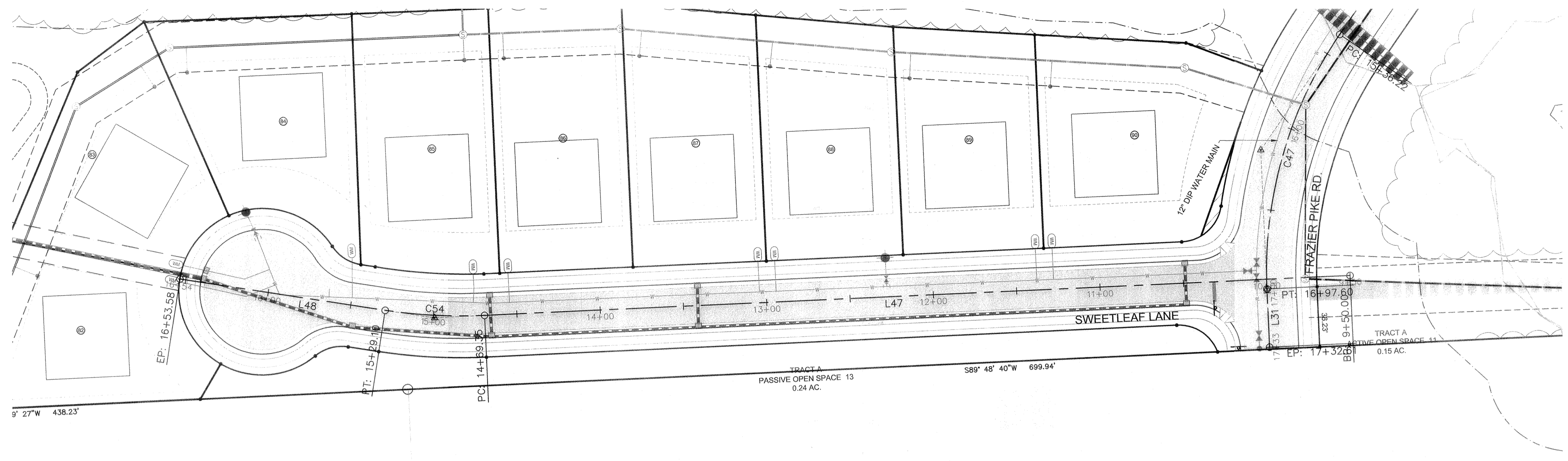
SHEET  
**C513**

REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018
REVISIONS		

~~PRELIMINARY~~  
~~NOT RELEASED~~  
 FOR CONSTRUCTION

ELIZABETH HEIGHTS

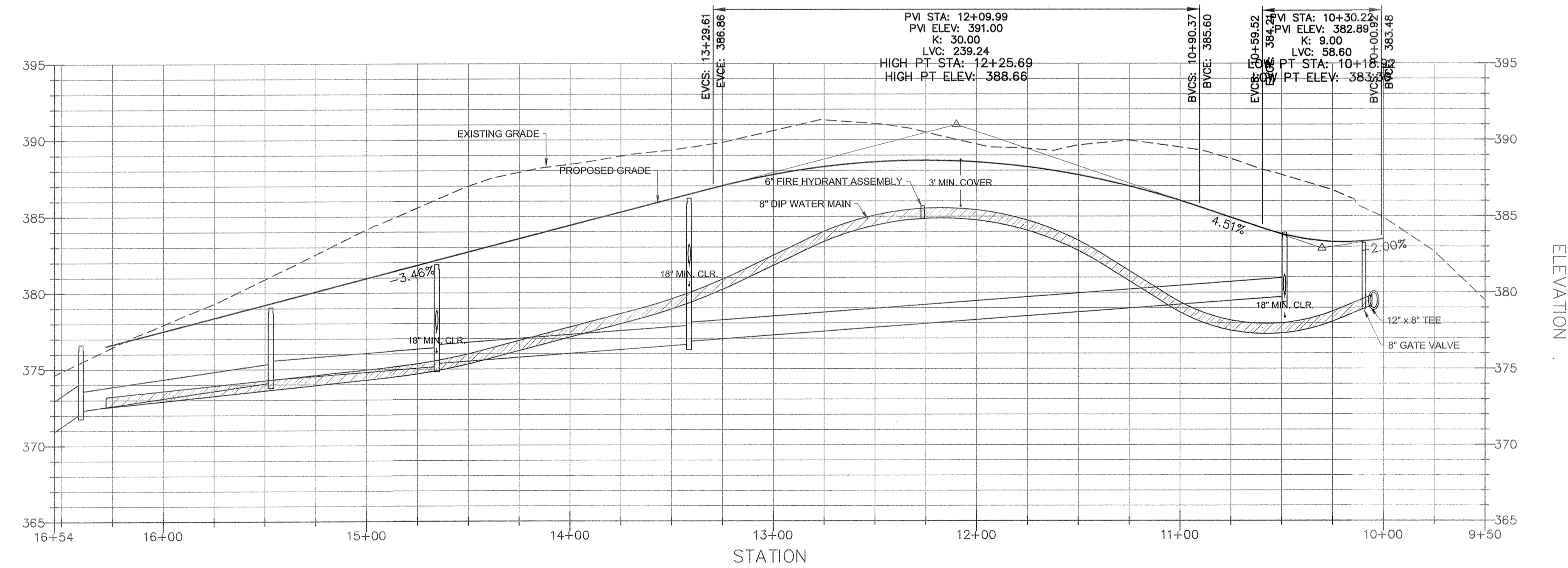




NORTH  
Referenced  
to N.C. GRID (NAD 83)

**SWEETLEAF LANE - PLAN**  
SCALE: 1"=40'  
STA: 10+00 - 16+54

SWEETLEAF LANE					
Number	Radius	Length	Line/Chord Direction	Start Station	End Station
L47		519.35	S89° 48' 49.18"W	9+50.00	14+69.35
C54	300.00	59.76	N84° 28' 47.87"W	14+69.35	15+29.10
L48		124.48	N78° 46' 24.92"W	15+29.10	16+53.58



**SWEETLEAF LANE - PROFILE**  
HOR. SCALE: 1"=40' VER. SCALE: 1"=8'  
STA: 10+00 - 16+54

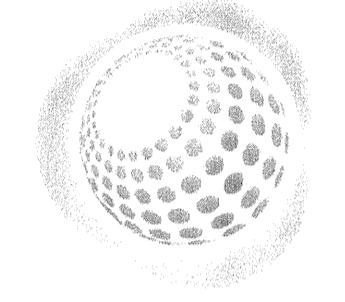
**Public**  
**Water Distribution / Extension System**  
The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh  
Public Utilities Department Permit # W-3549  
Authorization to Construct [Signature]  
Date 4/23/14

**Public**  
**Sewer Collection / Extension System**  
The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh  
Public Utilities Department Permit # S-4583  
Authorization to Construct [Signature]  
Date 4/23/14

**ATTENTION CONTRACTORS**  
The Construction Contractor responsible for the extension of water, sewer, and/or gas, as approved in these plans, is responsible for contacting the **Public Utilities Department** at (919) 996-4540 at least **twenty-four hours** prior to beginning any of their construction.  
**Failure** to notify both City Departments in advance of beginning construction, will result in the issuance of **monetary fines**, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.  
**Failure** to call for **Inspection**, **Install a Downstream Plug**, have **Permitted Plans** on the **Jobsite**, or any other **Violation of City of Raleigh Standards** will result in a **Fine and Possible Exclusion** from future work in the **City of Raleigh**.



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NCBELS FIRM No. C-2378



**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**  
1205 AVERETTE ROAD  
WAKE FOREST, NC 27587  
WAKE COUNTY, NC

**PLAN AND PROFILE**  
**SWEETLEAF LANE**

Project Engineer: TSS  
Designed By: MP  
Drawn By: MP  
Checked By: TSS  
Scale: AS SHOWN  
Date: 10/30/2016  
Project Number: 170348

~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~

SHEET  
**C514**

REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

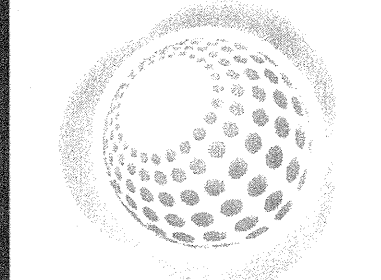
ELIZABETH HEIGHTS

**LEGEND:**

- LIMITS OF DISTURBANCE
- - - - - 326 EX CONTOUR LINE
- 326 PROPOSED CONTOUR LINE



**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2524 Rollins Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378

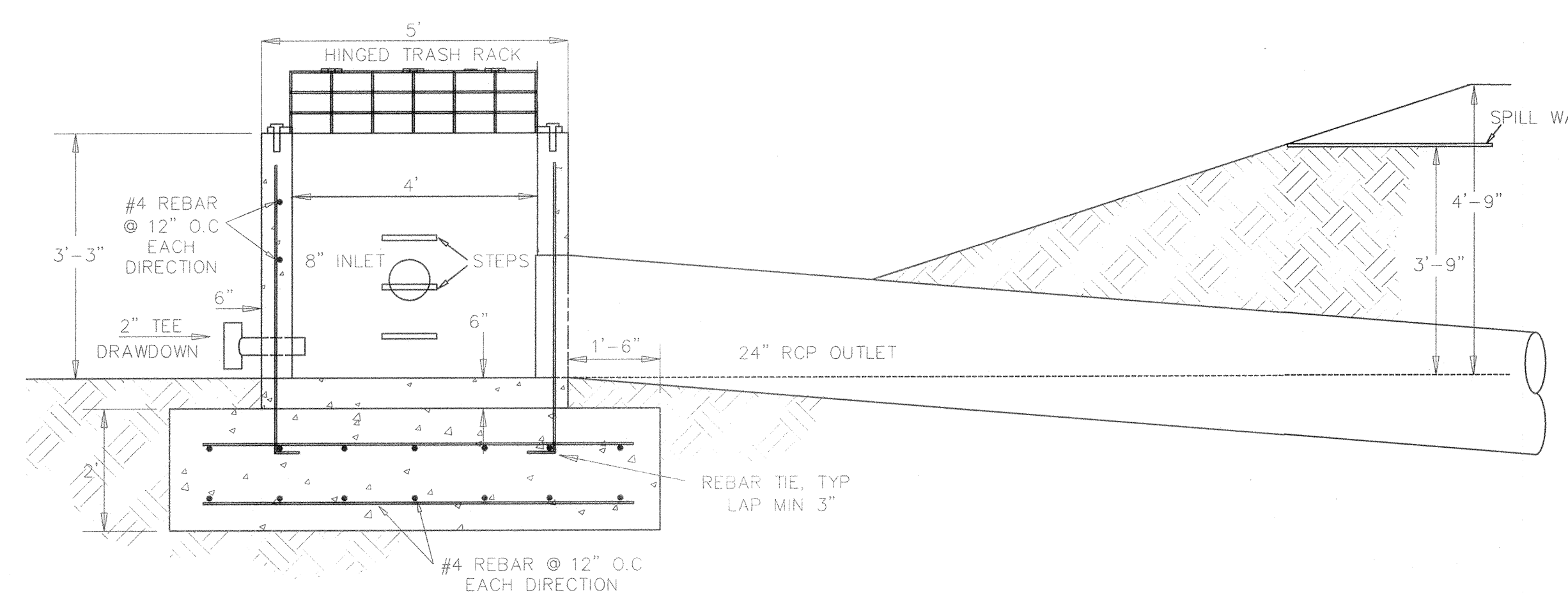
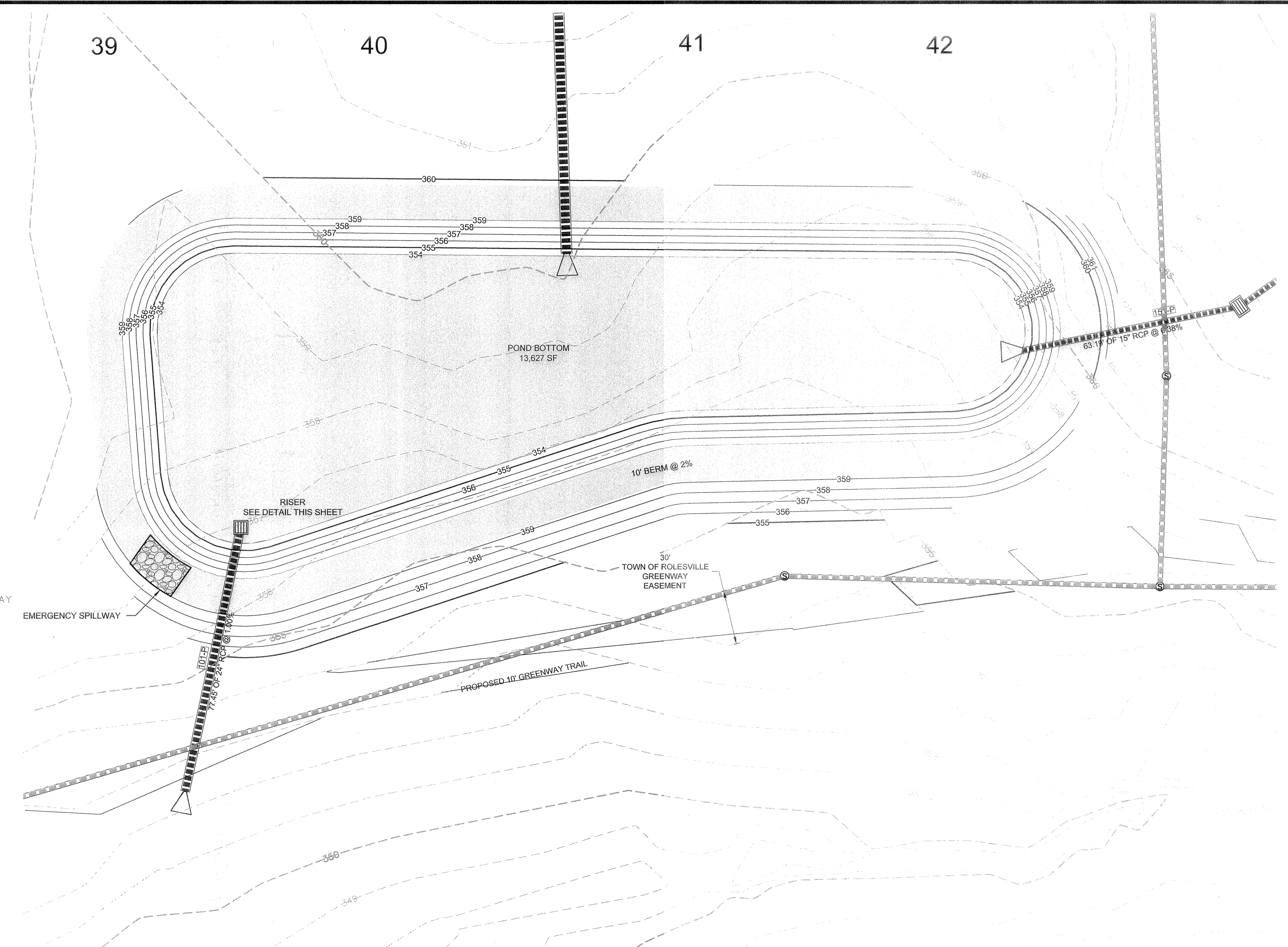


**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**BMP DETAILS**  
**BMP 1**

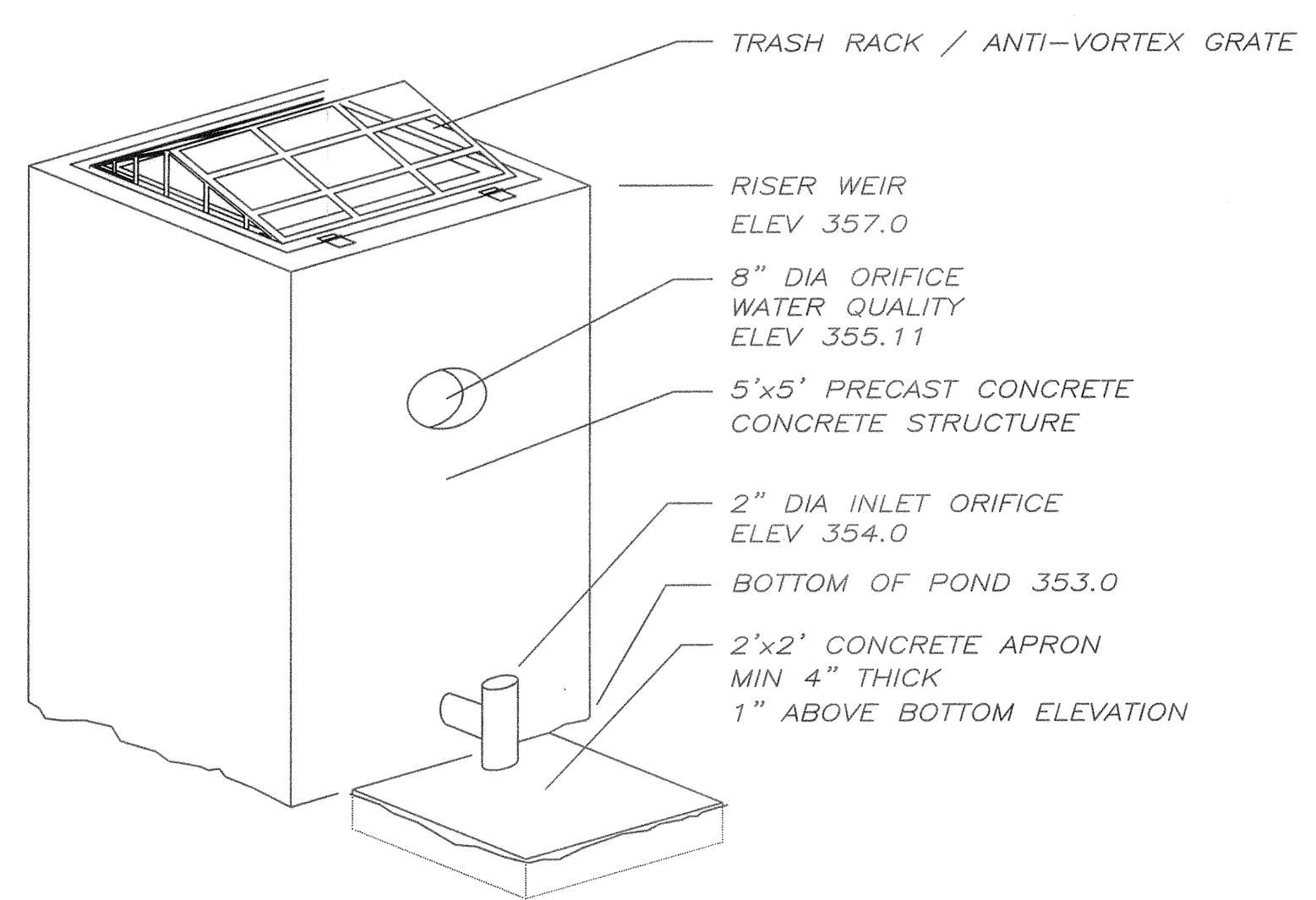
Project Engineer: TSS  
 Designed By: TSS  
 Drawn By: MP  
 Checked By: TSS  
 Scale: AS SHOWN  
 Date: 10/16/2018

Project Number: 170348  
 SHEET  
**C522**  
 10/16/2018

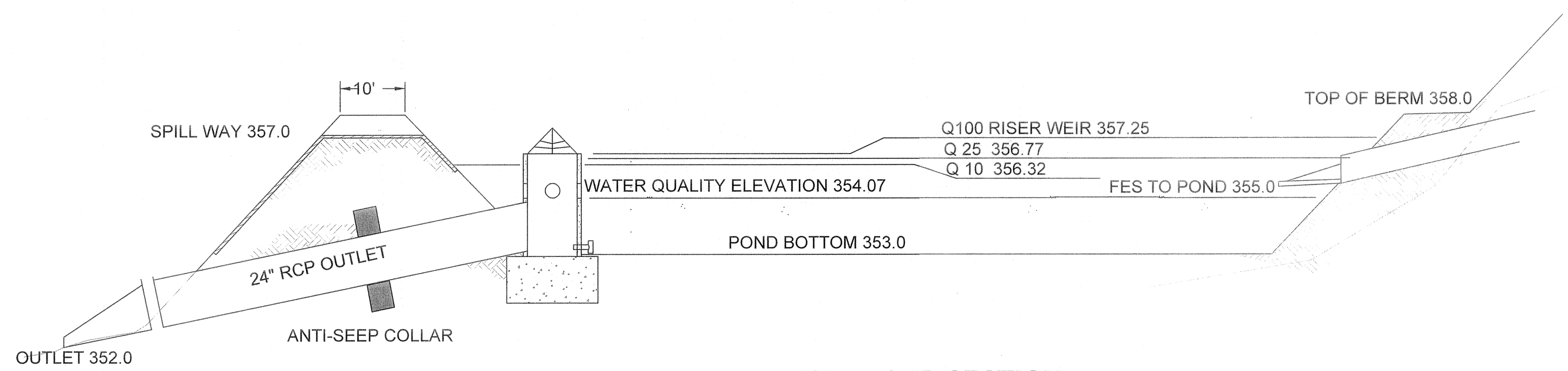


**RISER - SECTION**  
**SCALE: 1"=2'**

**BMP 1 - PLAN**  
**SCALE: 1"=20'**



**RISER STRUCTURE VIEW**  
**NOT TO SCALE**



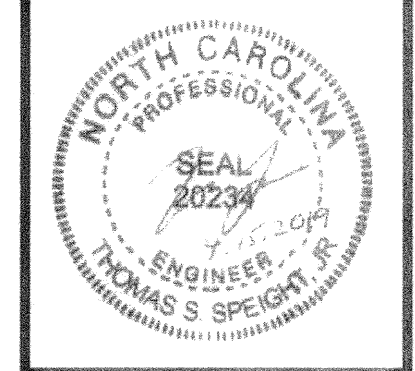
**TYPICAL POND SECTION**  
**NOT TO SCALE**

- SYMBOL LEGEND**
- ▲▲▲ END OF STREET SIGNAGE
  - STOP SIGN AND STREET NAME SIGN LOCATION
  - ACCESSIBILITY RAMP
  - ⊕ LARGE STREET TREE, TYP 2 1/2" CALIPER MIN

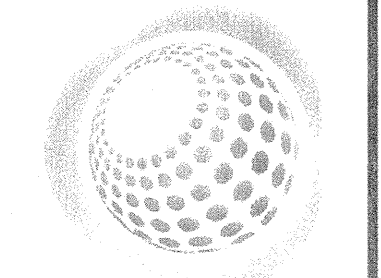


**ROLESVILLE NOTE:**  
 TRACT B - TOWNHOMES IS A SEPARATE SUBMITTAL AS A QUASI-JUDICIAL DETAILED SITE PLAN AND SHOULD BE NOTED AS NOT INCLUDED WITH THESE SUBDIVISION CONSTRUCTION PLANS. THE DETAILED SITE PLAN IS A SEPARATE QUASI-JUDICIAL APPROVAL PROCESS PER THE ROLESVILLE UNIFIED DEVELOPMENT ORDINANCE. THE DETAILED SITE PLAN MUST BE APPROVED BY THE TOWN BOARD OF COMMISSIONERS AND CANNOT BE INCLUDED IN THE ADMINISTRATIVE APPROVAL OF THE CONSTRUCTION PLANS FOR TRACT A, SINGLE-FAMILY RESIDENTIAL LOTS. THE SUBMITTED SITE PLAN SHALL INCLUDE THE LISTED INFORMATION STATED IN SECTION 3.6.3 GENERAL CONDITIONS AND LIMITATIONS ASSOCIATED WITH A SPECIAL USE PERMIT. A COPY OF SAID SECTION IS BELOW. PLEASE SUBMIT A REVISED DETAILED SITE PLAN APPLICATION FOR PHASE 2, TOWNHOMES THAT WILL INCLUDE ALL IMPROVEMENTS AND DETAILS LISTED IN SECTION 3.6.3 FOR THE DEVELOPMENT. PLEASE SUBMIT A SEPARATE DETAILED SITE PLAN APPLICATION FOR TRACT B - TOWNHOMES THAT WILL INCLUDE ALL IMPROVEMENTS FOR THE DEVELOPMENT OF THIS TRACT.

REVNO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018



**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378



**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27787  
 WAKE COUNTY, NC

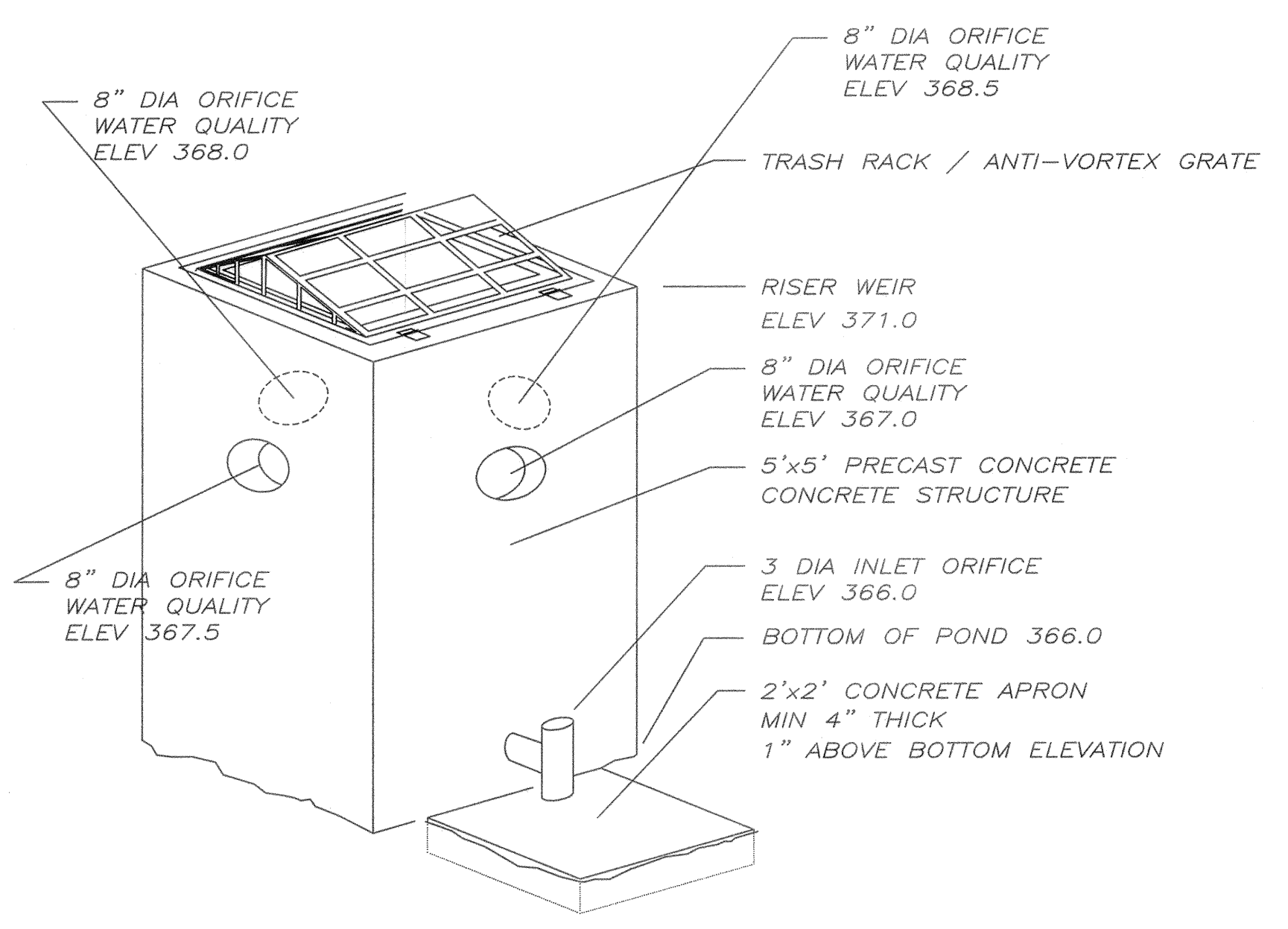
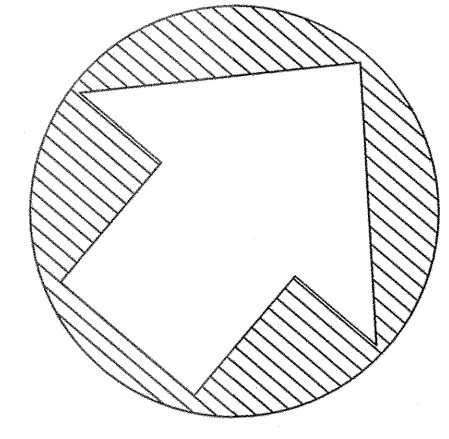
**BMP DETAILS**  
 BMP2

Project Engineer: TSS  
 Designed By: TSS  
 Drawn By: MP  
 Checked By: TSS  
 Scale: AS SHOWN  
 Date: 10/16/2018  
 Project Number: 170348

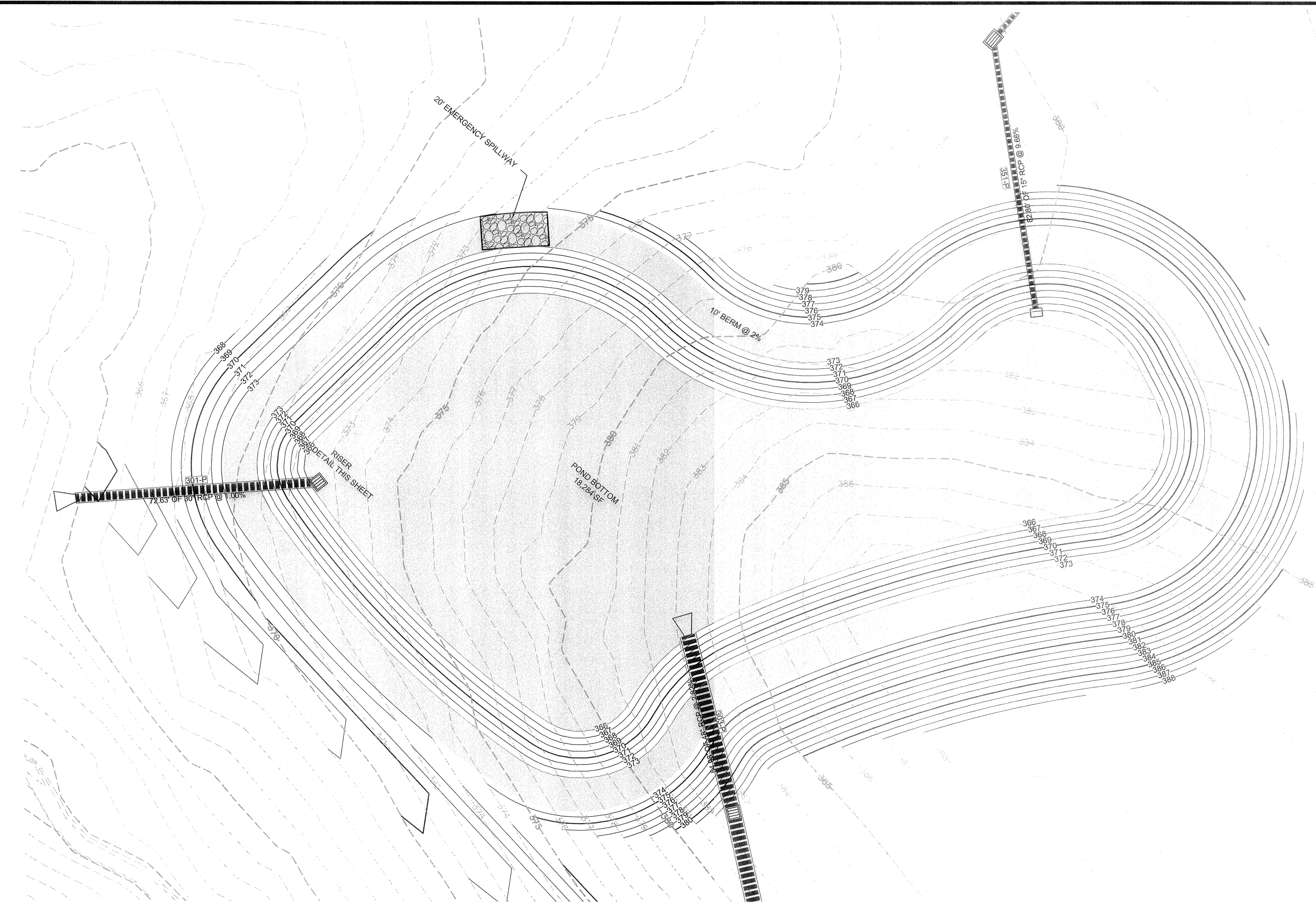
SHEET  
**C523**

**LEGEND:**

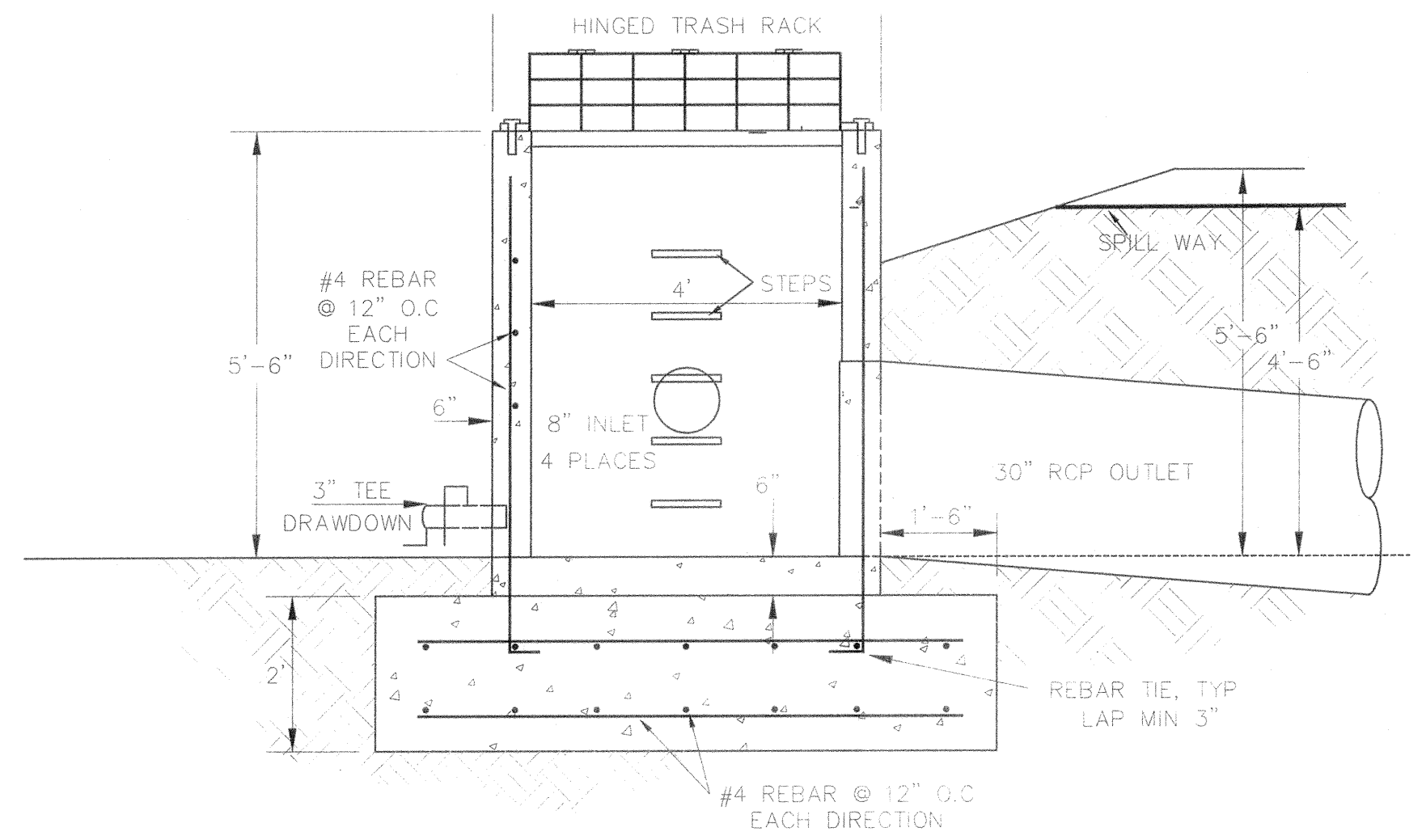
- LIMITS OF DISTURBANCE
- - - - - EX CONTOUR LINE
- 326 — PROPOSED CONTOUR LINE



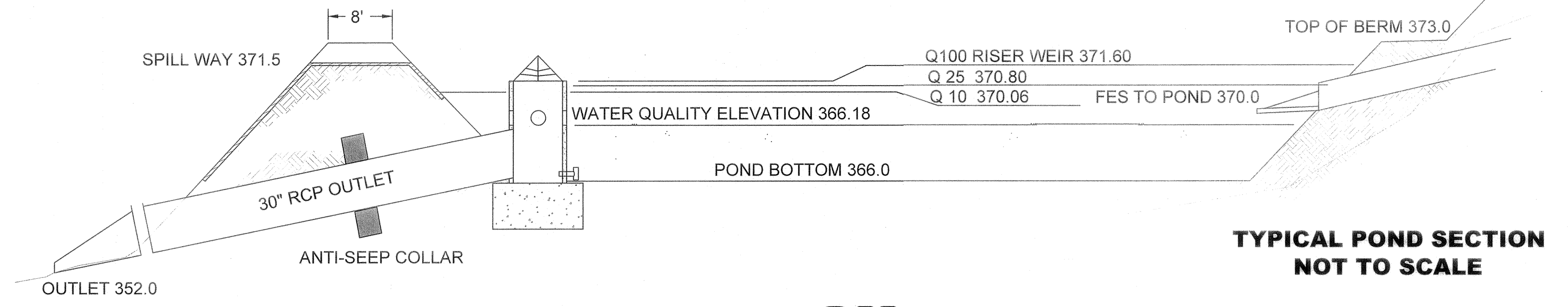
**RISER STRUCTURE VIEW**  
 NOT TO SCALE



**BMP 2 - PLAN**  
 SCALE: 1"=20'



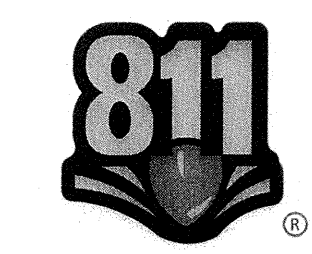
**RISER - SECTION**  
 SCALE: 1"=2'



**TYPICAL POND SECTION**  
 NOT TO SCALE

REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018
REVISIONS		

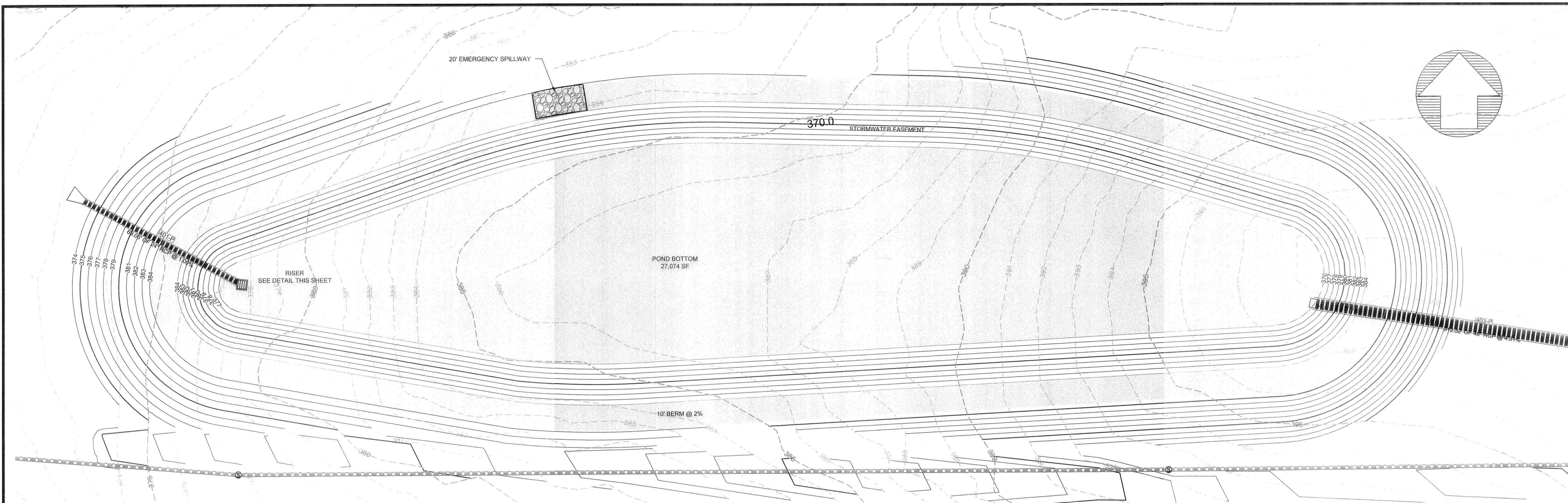
**ROLESVILLE NOTE:**  
 TRACT B - TOWNHOMES IS A SEPARATE SUBMITTAL AS A QUASI-JUDICIAL DETAILED SITE PLAN AND SHOULD BE NOTED AS NOT INCLUDED WITH THESE SUBDIVISION CONSTRUCTION PLANS. THE DETAILED SITE PLAN IS A SEPARATE QUASI-JUDICIAL APPROVAL PROCESS PER THE ROLESVILLE UNIFIED DEVELOPMENT ORDINANCE. THE DETAILED SITE PLAN MUST BE APPROVED BY THE TOWN BOARD OF COMMISSIONERS AND CANNOT BE INCLUDED IN THE ADMINISTRATIVE APPROVAL OF THE CONSTRUCTION PLANS FOR TRACT A. SINGLE-FAMILY RESIDENTIAL LOTS. THE SUBMITTED SITE PLAN SHALL INCLUDE THE LISTED INFORMATION STATED IN SECTION 3.6.3 GENERAL CONDITIONS AND LIMITATIONS ASSOCIATED WITH A SPECIAL USE PERMIT. A COPY OF SAID SECTION IS BELOW. PLEASE SUBMIT A REVISED DETAIL SITE PLAN APPLICATION FOR PHASE 2, TOWNHOMES THAT WILL INCLUDE ALL IMPROVEMENTS AND DETAILS LISTED IN SECTION 3.6.3 FOR THE DEVELOPMENT. PLEASE SUBMIT A SEPARATE DETAIL SITE PLAN APPLICATION FOR TRACT B - TOWNHOMES THAT WILL INCLUDE ALL IMPROVEMENTS FOR THE DEVELOPMENT OF THIS TRACT.



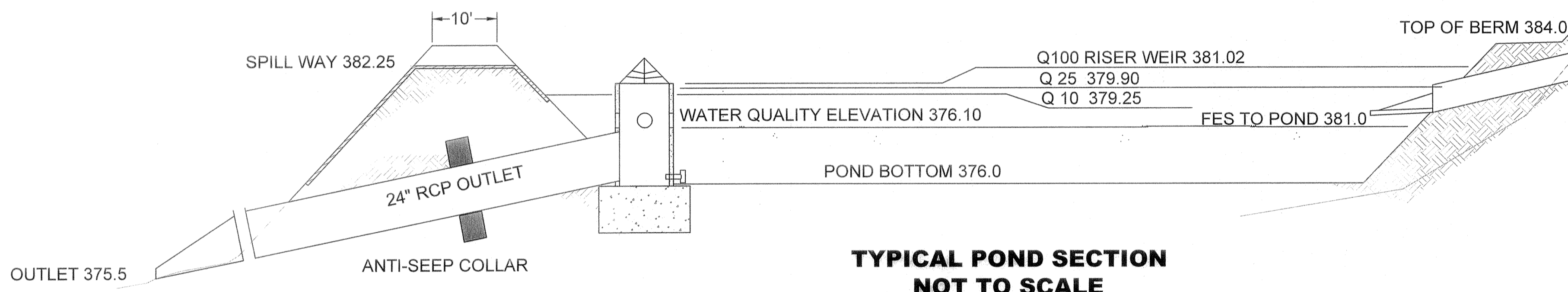
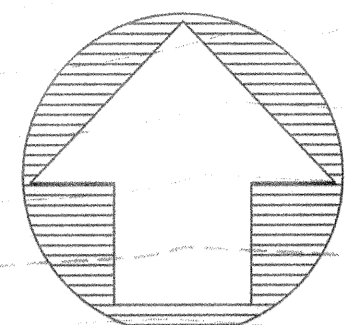
**KNOW WHAT IS BELOW**  
 CALL BEFORE YOU DIG



10/16/2018



**BMP 3 - PLAN**  
SCALE: 1"=20'



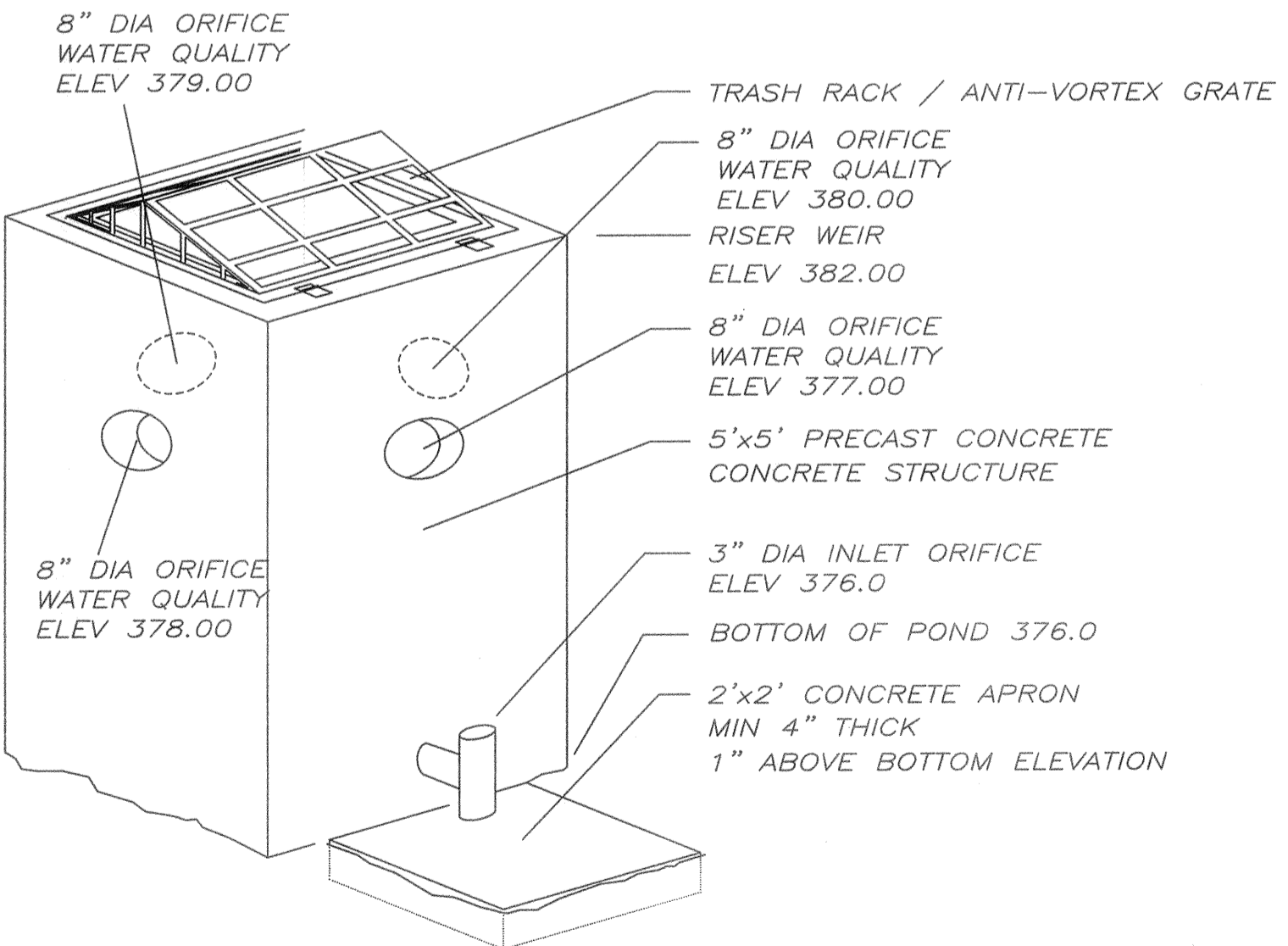
**TYPICAL POND SECTION**  
NOT TO SCALE

**LEGEND:**

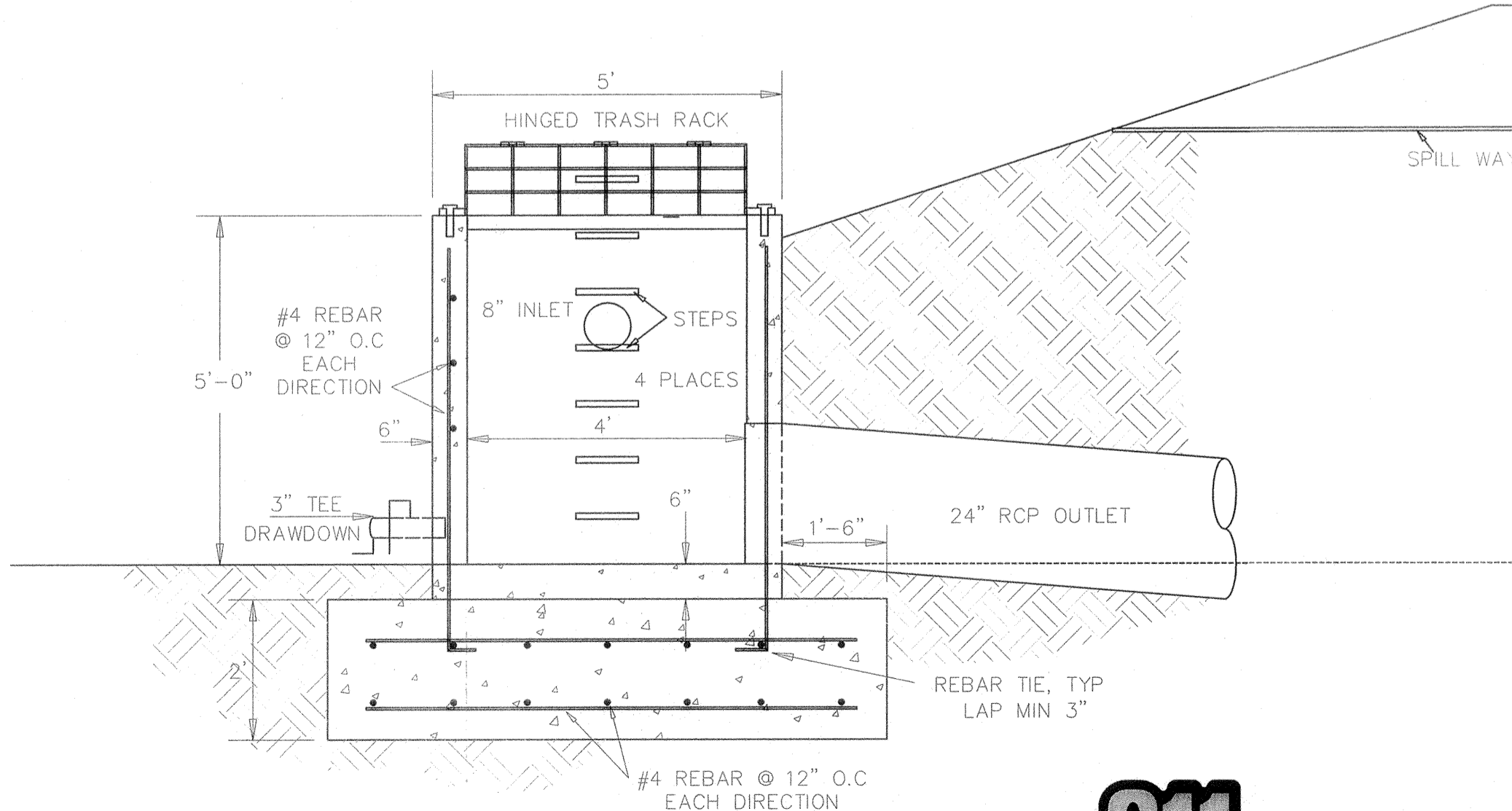
--- LIMITS OF DISTURBANCE

-326- EX CONTOUR LINE

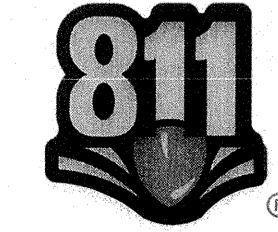
-326- PROPOSED CONTOUR LINE



**RISER STRUCTURE VIEW**  
NOT TO SCALE



**RISER - SECTION**  
SCALE: 1"=2'

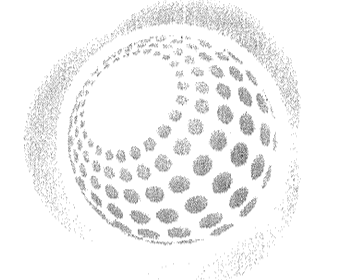


**ROLESVILLE NOTE:**  
TRACT B - TOWNHOMES IS A SEPARATE SUBMITTAL AS A QUASI-JUDICIAL DETAILED SITE PLAN AND SHOULD BE NOTED AS NOT INCLUDED WITH THESE SUBDIVISION CONSTRUCTION PLANS. THE DETAILED SITE PLAN IS A SEPARATE QUASI-JUDICIAL APPROVAL PROCESS PER THE ROLESVILLE UNIFIED DEVELOPMENT ORDINANCE. THE DETAILED SITE PLAN MUST BE APPROVED BY THE TOWN BOARD OF COMMISSIONERS AND CANNOT BE INCLUDED IN THE ADMINISTRATIVE APPROVAL OF THE CONSTRUCTION PLANS FOR TRACT A, SINGLE-FAMILY RESIDENTIAL LOTS. THE SUBMITTED SITE PLAN SHALL INCLUDE THE LISTED INFORMATION STATED IN SECTION 3.6.3 GENERAL CONDITIONS AND LIMITATIONS ASSOCIATED WITH A SPECIAL USE PERMIT. A COPY OF SAID SECTION IS BELOW. PLEASE SUBMIT A REVISED DETAILED SITE PLAN APPLICATION FOR PHASE 2, TOWNHOMES THAT WILL INCLUDE ALL IMPROVEMENTS AND DETAILS LISTED IN SECTION 3.6.3 FOR THE DEVELOPMENT. PLEASE SUBMIT A SEPARATE DETAILED SITE PLAN APPLICATION FOR TRACT B - TOWNHOMES THAT WILL INCLUDE ALL IMPROVEMENTS FOR THE DEVELOPMENT OF THIS TRACT.

REVNO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018



**Bateman Civil Survey Company**  
Engineers • Surveyors • Planners  
2624 Rollins Avenue, Apex, North Carolina 27539  
Phone: 919.577.1080 Fax: 919.577.1081  
NCBELS FIRM No. C-2376



**ELIZABETH HEIGHTS**  
CONSTRUCTION DRAWINGS

1205 AVERETTE ROAD  
WAKE FOREST, NC 27587  
WAKE COUNTY, NC

**BMP DETAILS**  
BMP3

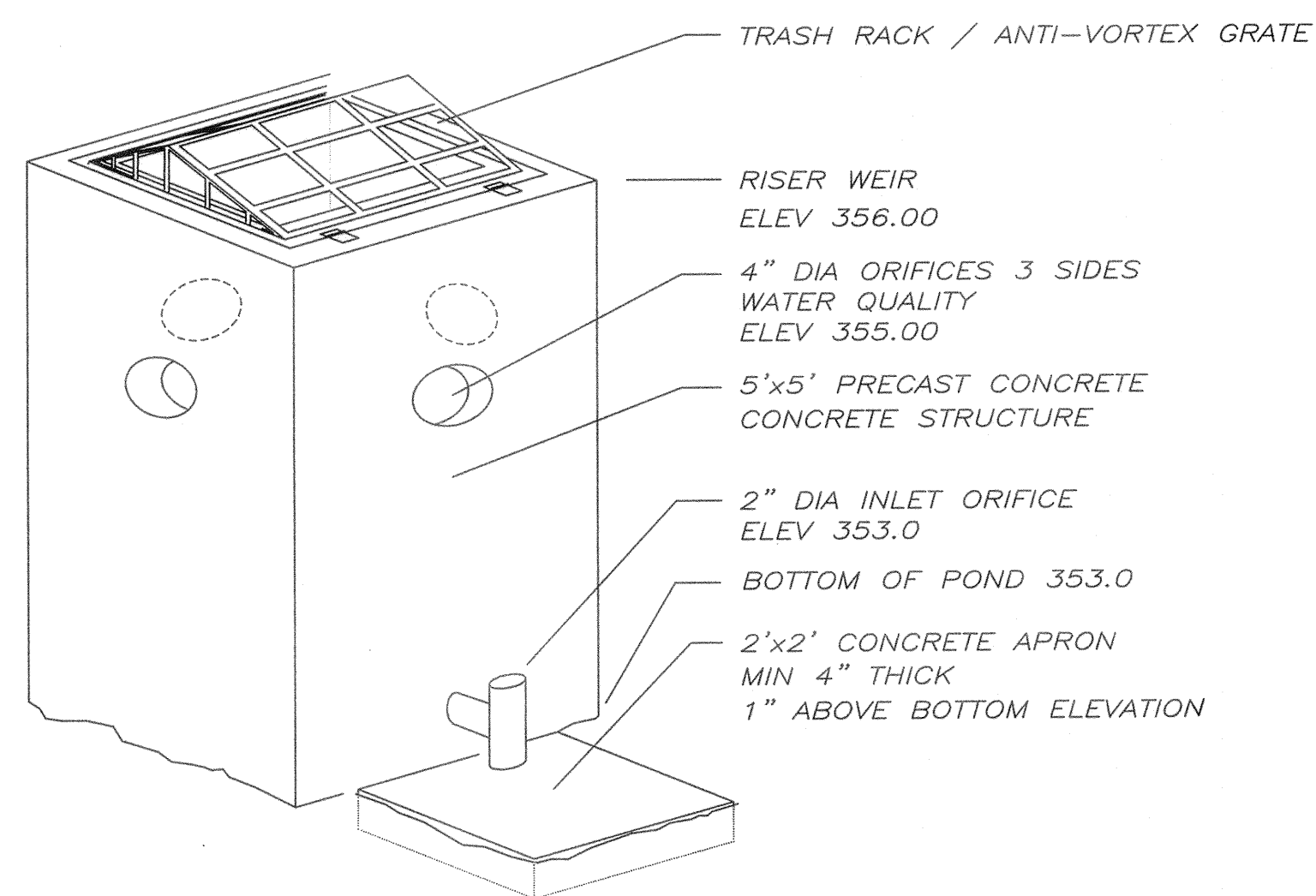
Project Engineer:	TSS
Designed By:	TSS
Drawn By:	MP
Checked By:	TSS
Scale:	AS SHOWN
Date:	10/16/2018
Project Number:	170348

SHEET  
**C524**

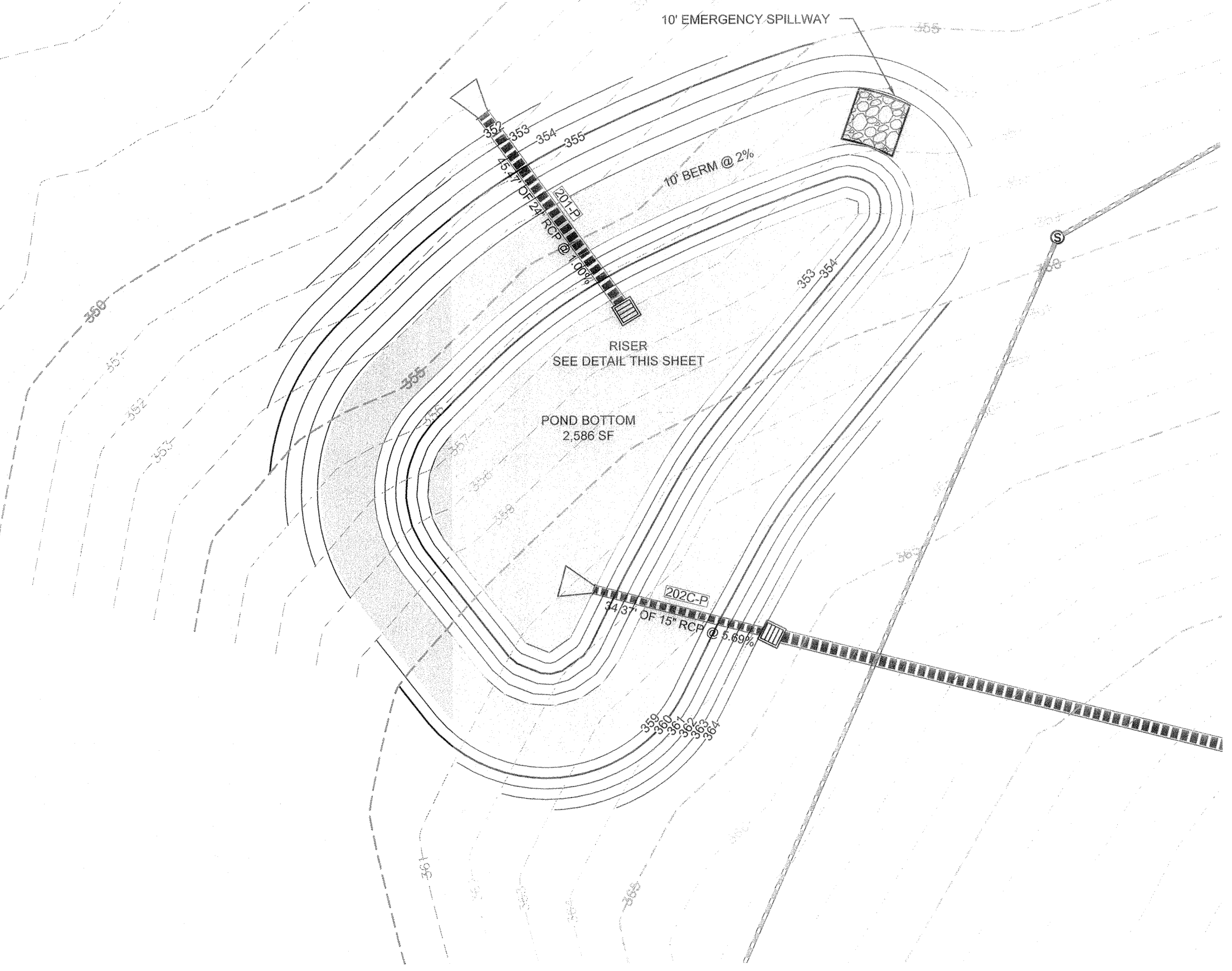
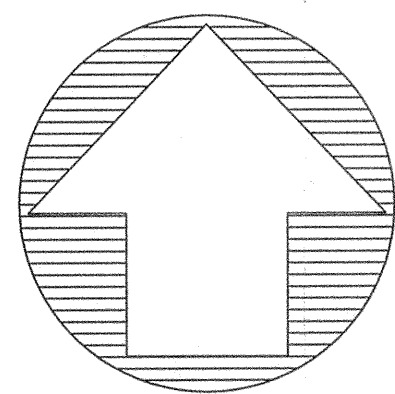
10/16/2018

**LEGEND:**

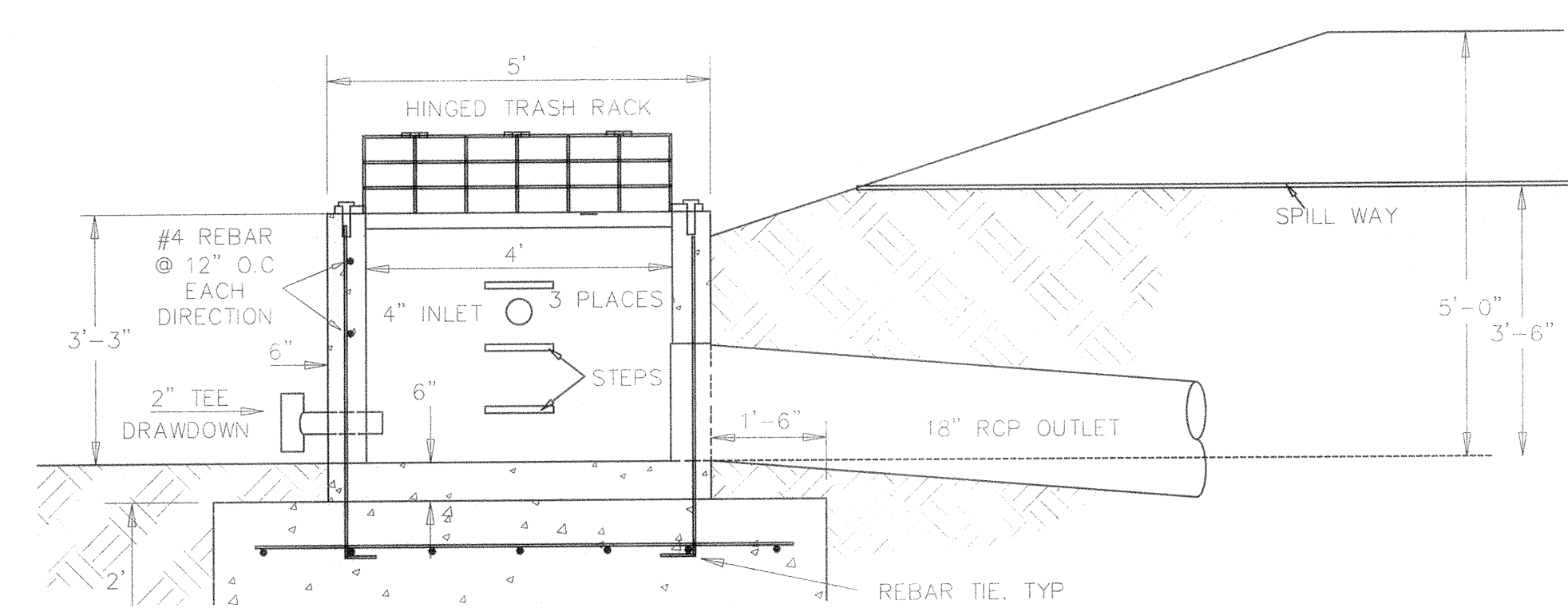
- LIMITS OF DISTURBANCE
- 326- EX CONTOUR LINE
- 326- PROPOSED CONTOUR LINE



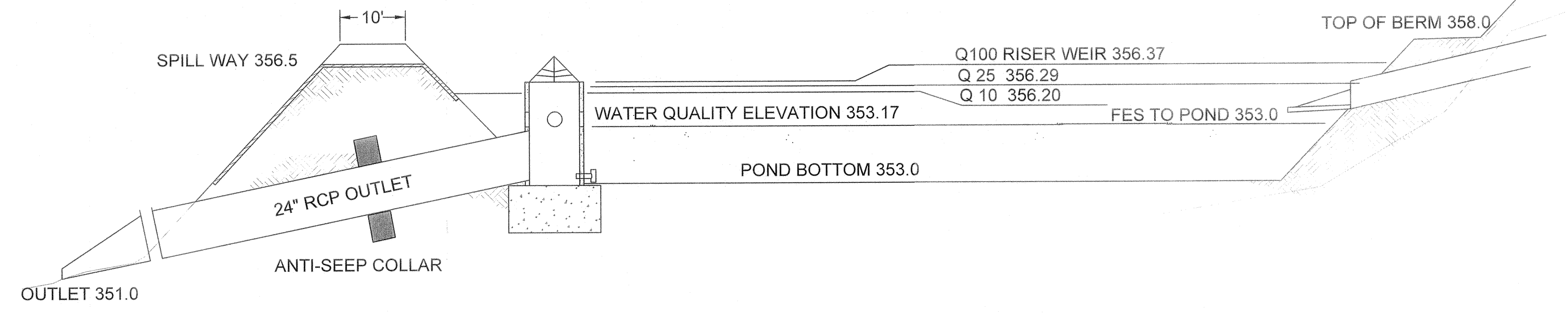
**RISER STRUCTURE VIEW  
NOT TO SCALE**



**BMP 4 - PLAN  
SCALE: 1"=20'**



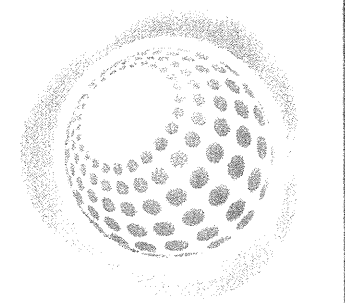
**RISER - SECTION  
SCALE: 1"=2'**



**TYPICAL POND SECTION  
NOT TO SCALE**



**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2376



**ELIZABETH HEIGHTS  
CONSTRUCTION DRAWINGS**  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**BMP DETAILS  
BMP4**

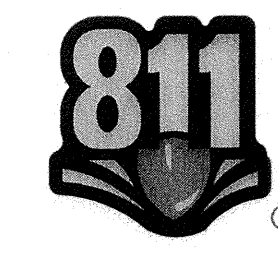
Project Engineer:	TSS
Designed By:	TSS
Drawn By:	MP
Checked By:	TSS
Scale:	AS SHOWN
Date:	10/16/2018
Project Number:	170348

SHEET  
**C525**

10/16/2018

**ROLESVILLE NOTE:**  
 TRACT B - TOWNHOMES IS A SEPARATE SUBMITTAL AS A QUASI-JUDICIAL DETAILED SITE PLAN AND SHOULD BE NOTED AS NOT INCLUDED WITH THESE SUBDIVISION CONSTRUCTION PLANS. THE DETAILED SITE PLAN IS A SEPARATE QUASI-JUDICIAL APPROVAL PROCESS PER THE ROLESVILLE UNIFIED DEVELOPMENT ORDINANCE. THE DETAILED SITE PLAN MUST BE APPROVED BY THE TOWN BOARD OF COMMISSIONERS AND CANNOT BE INCLUDED IN THE ADMINISTRATIVE APPROVAL OF THE CONSTRUCTION PLANS FOR TRACT A, SINGLE-FAMILY RESIDENTIAL LOTS. THE SUBMITTED SITE PLAN SHALL INCLUDE THE LISTED INFORMATION STATED IN SECTION 3.6.3 GENERAL CONDITIONS AND LIMITATIONS ASSOCIATED WITH A SPECIAL USE PERMIT. A COPY OF SAID SECTION IS BELOW. PLEASE SUBMIT A REVISED DETAILED SITE PLAN APPLICATION FOR PHASE 2, TOWNHOMES THAT WILL INCLUDE ALL IMPROVEMENTS AND DETAILS LISTED IN SECTION 3.6.3 FOR THE DEVELOPMENT. PLEASE SUBMIT A SEPARATE DETAILED SITE PLAN APPLICATION FOR TRACT B - TOWNHOMES THAT WILL INCLUDE ALL IMPROVEMENTS FOR THE DEVELOPMENT OF THIS TRACT.

REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

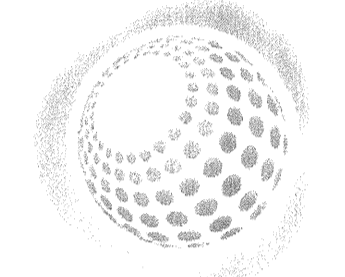


**KNOW WHAT IS BELOW  
CALL BEFORE YOU DIG**





**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378



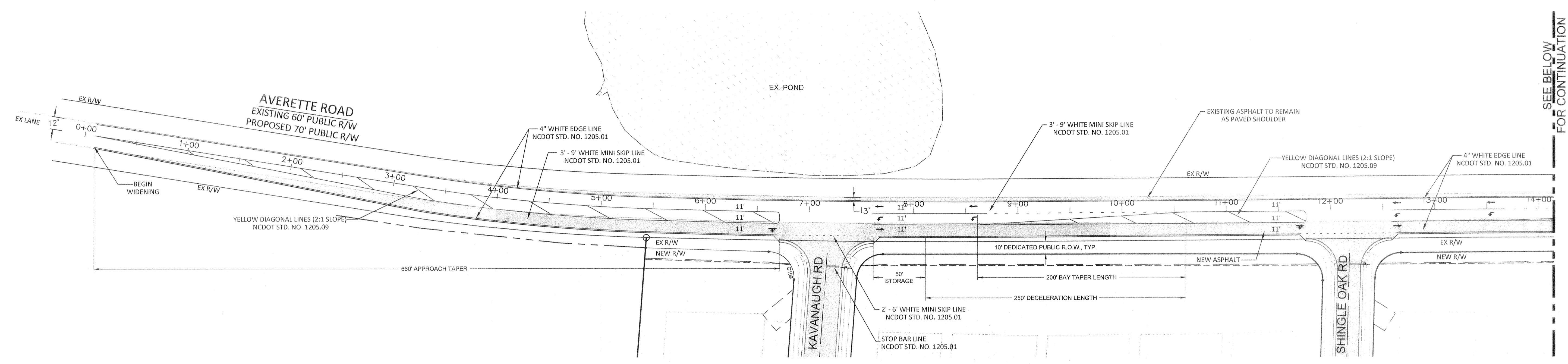
**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**AVERETTE ROAD**  
**WIDENING PLAN**

Project Engineer: TSS  
 Designed By: LEG  
 Drawn By: LEG  
 Checked By: TSS  
 Scale: 1"=50'  
 Date: 10/30/2018  
 Project Number: 170348

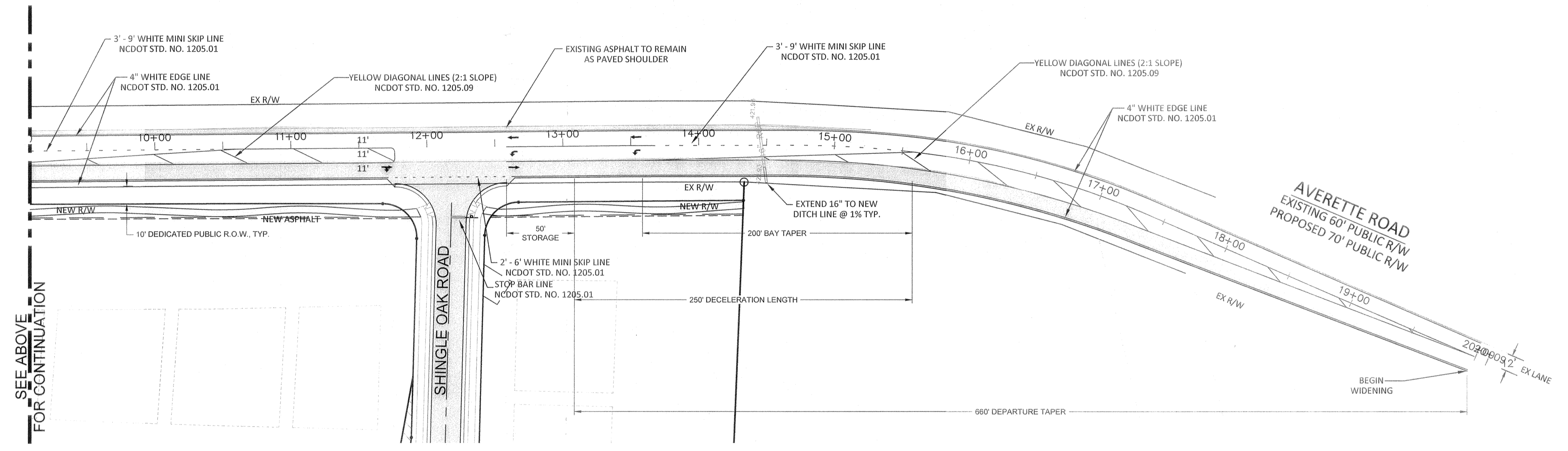
SHEET  
**C701**  
 OF: ---

ELIZABETH HEIGHTS

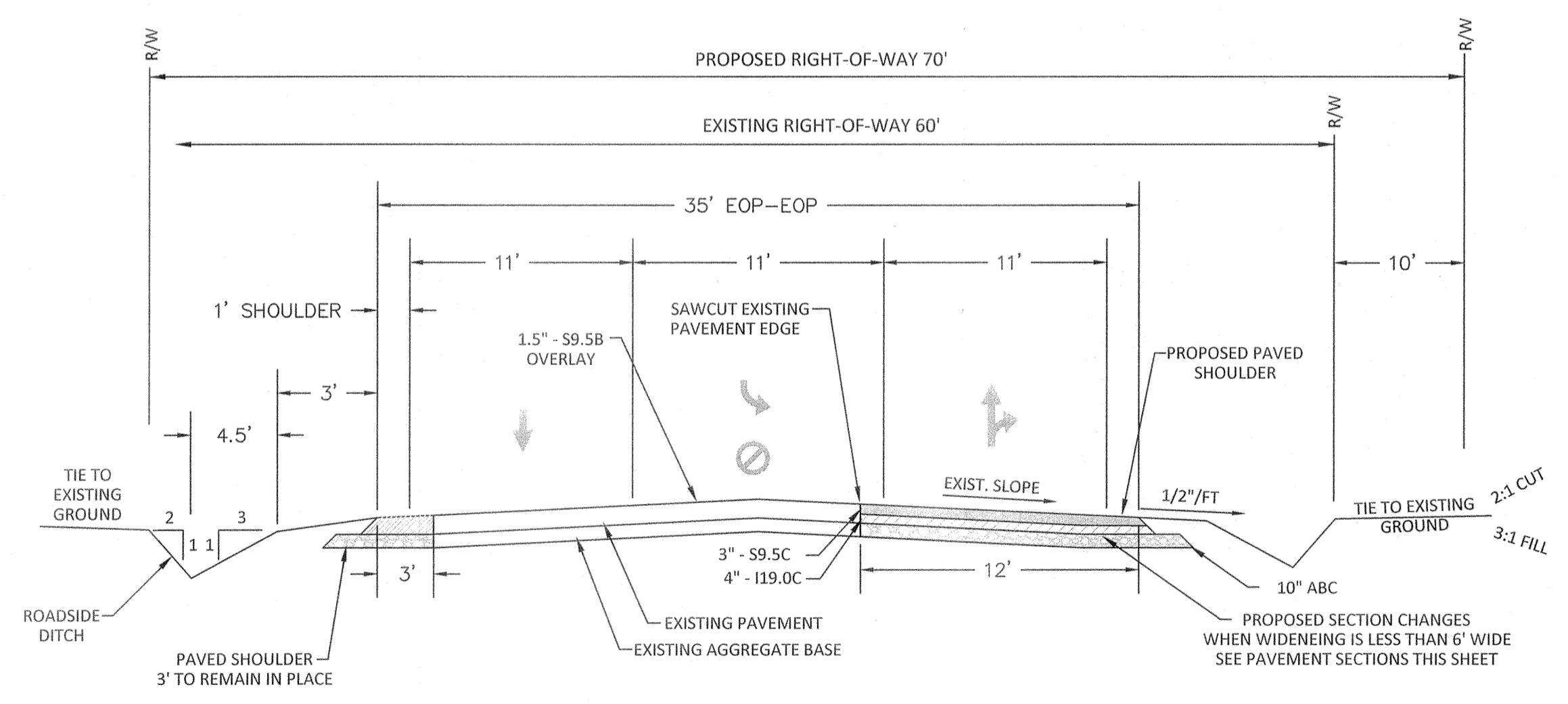
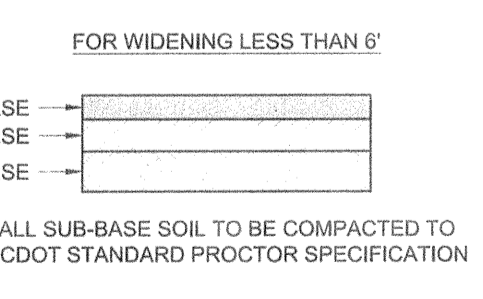
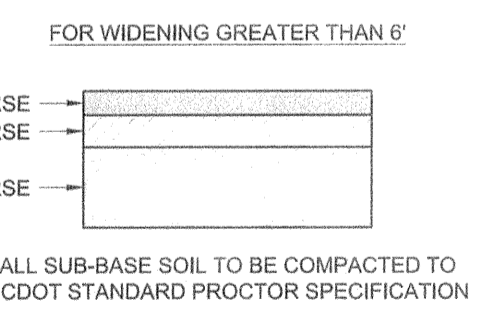


SEE BELOW  
FOR CONTINUATION

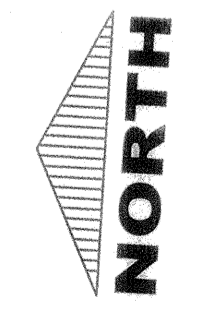
- NOTES:**
1. ALL CONSTRUCTION IN THE RIGHT OF WAY SHALL BE IN ACCORDANCE TO NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS.
  2. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM THEIR ACTIVITIES. CONTRACTOR SHALL CALL UTILITY LOCATOR SERVICE 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. NC ONE CALL 1-800-632-4949 PER NCGS 87-102.
  3. NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DRIVEWAY PERMIT IS REQUIRED BEFORE STARTING CONSTRUCTION.
  4. THE DEVELOPER IS RESPONSIBLE FOR THE FABRICATION AND INSTALLATION OF ALL REQUIRED SIGNS AND PAVEMENT MARKINGS WITH IN THE PUBLIC RIGHT OF WAY.
  5. CONTRACTOR IS RESPONSIBLE FOR PREPARING AND SUBMITTING A TRAFFIC MAINTENANCE PLAN FOR REVIEW AND APPROVAL BY DOT PRIOR TO BEGINNING WORK WITHIN THE RIGHT OF WAY.
  6. CONTRACTOR SHALL MAINTAIN ACCESS DURING ALL TIMES OF CONSTRUCTION.
  7. CONTRACTOR SHALL CONTACT WAKE COUNTY SCHOOLS TO COORDINATE ROAD WORK SO IT WILL NOT ADVERSELY AFFECT THE SCHOOLS TRANSPORTATION SCHEDULE AND OR OPERATIONS.
  8. THERMOPLASTIC PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE INSTALLED WITHIN THE TURN LANE CONSTRUCTION LIMITS IN ACCORDANCE WITH THE STANDARD NCDOT STANDARDS AND SPECIFICATIONS.
  9. THE CONTRACTOR SHALL RESURFACE THE ENTIRE WITH OF THE ROADWAY FOR THE ENTIRE LENGTH OF THE CONSTRUCTION LIMITS WITH 1.5 INCHES OF S-9.5B. BOTH ENDS OF THE TURN LANE SHALL BE MILLED (0" TO 1.5") A MINIMUM OF 50 FEET SO THAT THERE WILL BE A SMOOTH TRANSITION BACK TO THE EXISTING PAVEMENT.



SEE ABOVE  
FOR CONTINUATION



**TYPICAL ROAD WIDENING SECTION**  
 AVERETTE ROAD, WAKE COUNTY  
 NOT TO SCALE

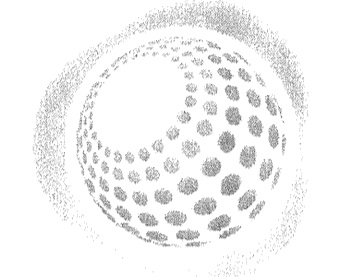


~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~  
 10/17/2018

REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018



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 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378



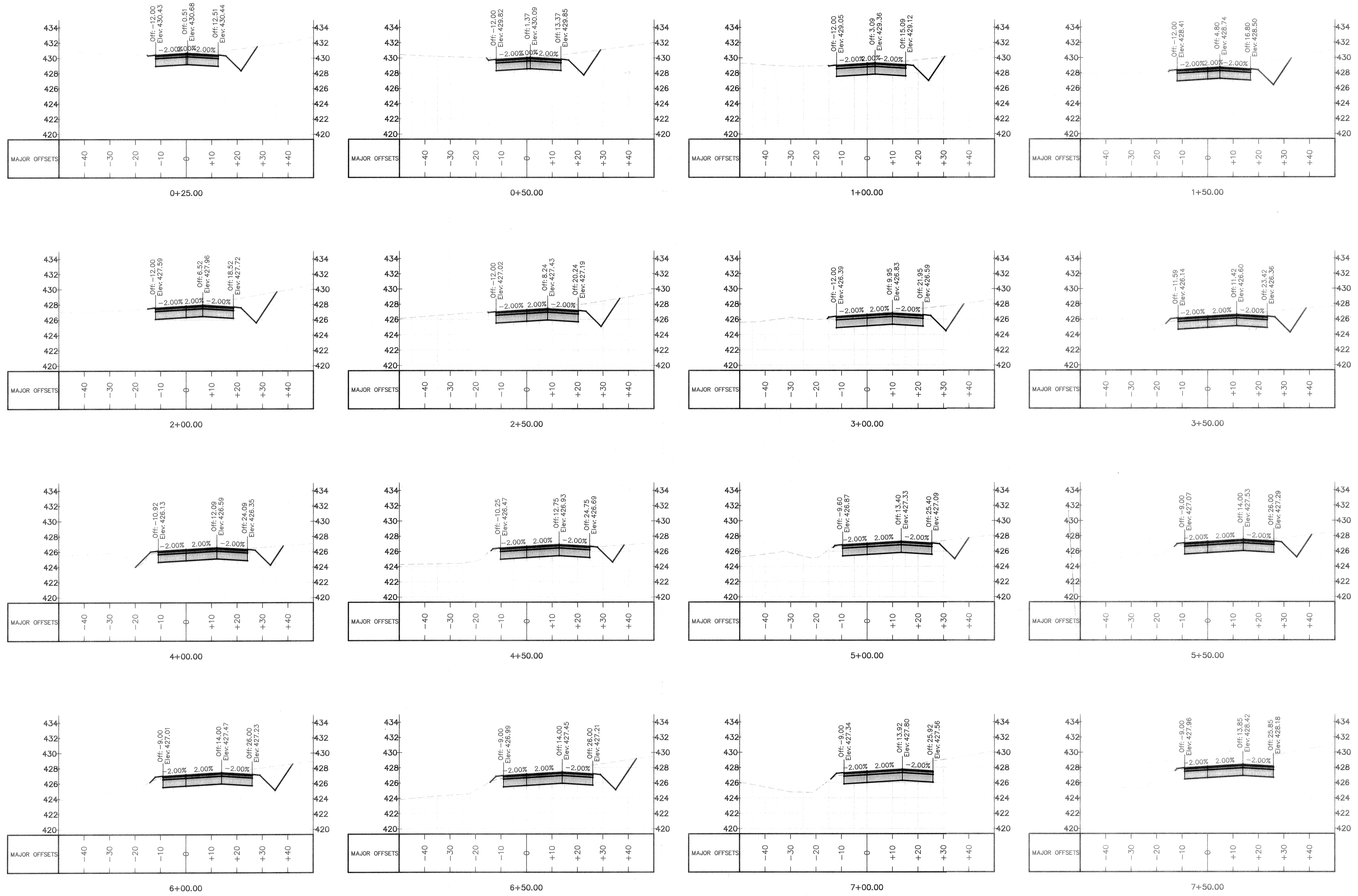
**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**AVERETTE ROAD**  
**CROSS SECTIONS**

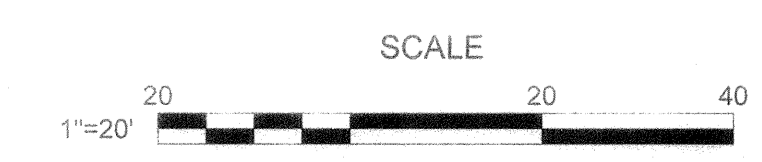
Project Engineer: TSS  
 Designed By: RAJ  
 Drawn By: RAJ  
 Checked By: TSS  
 Scale: NTS  
 Date: 10/30/2018  
 Project Number: 170348

SHEET  
**C702**  
 OF: —

ELIZABETH HEIGHTS



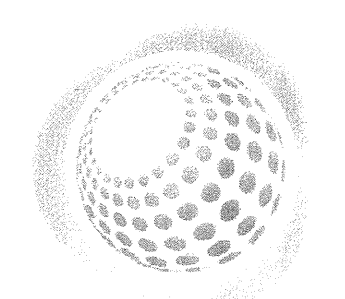
REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018



~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~  
 12/07/2018



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 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
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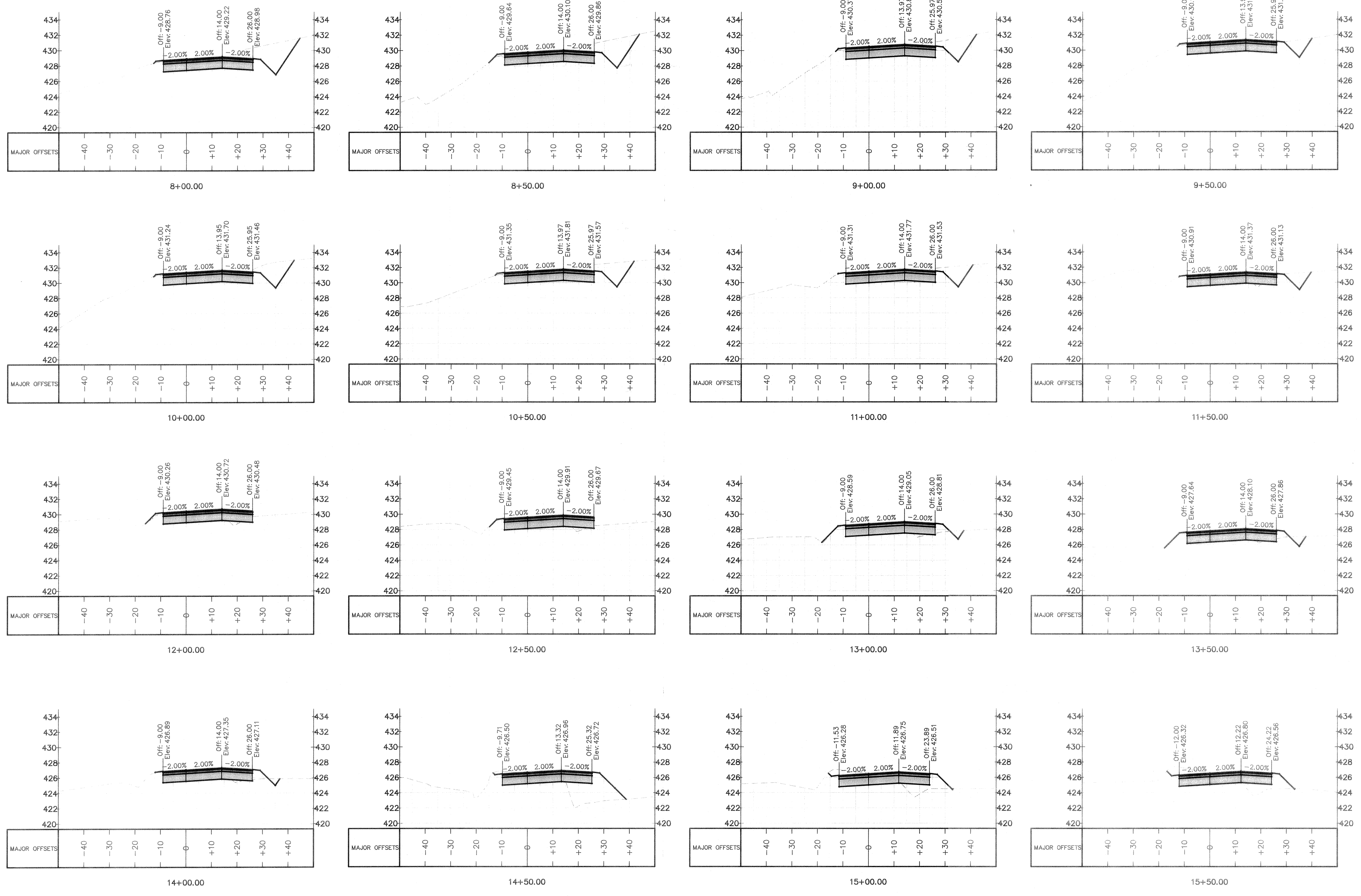
**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS

**AVERETTE ROAD**  
 CROSS SECTIONS

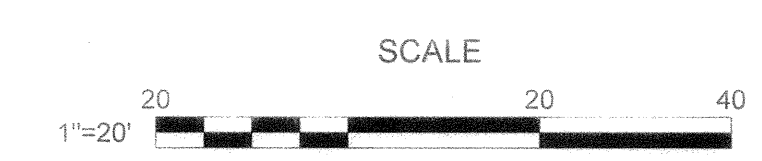
Project Engineer: TSS  
 Designed By: RAJ  
 Drawn By: RAJ  
 Checked By: TSS  
 Scale: NTS  
 Date: 10/30/2018  
 Project Number: 170348

SHEET  
**C703**  
 OF: —

ELIZABETH HEIGHTS

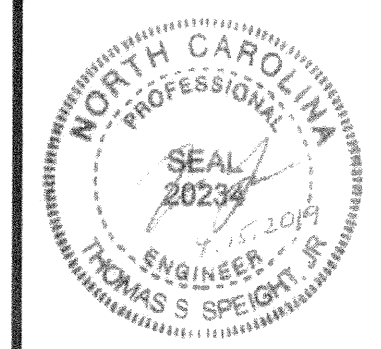


REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

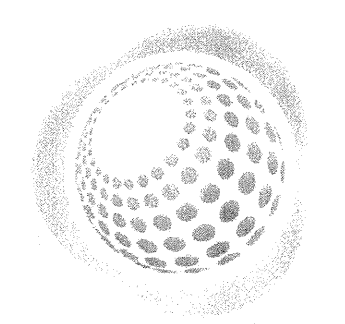


~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~





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 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378



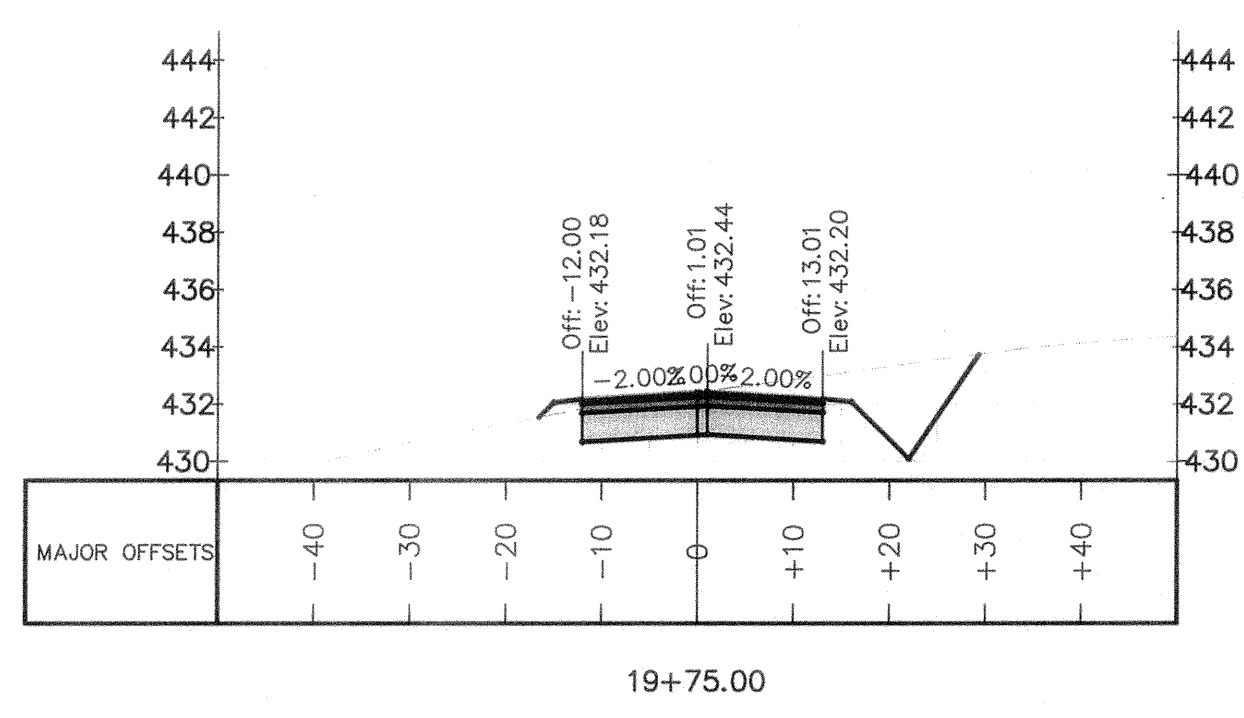
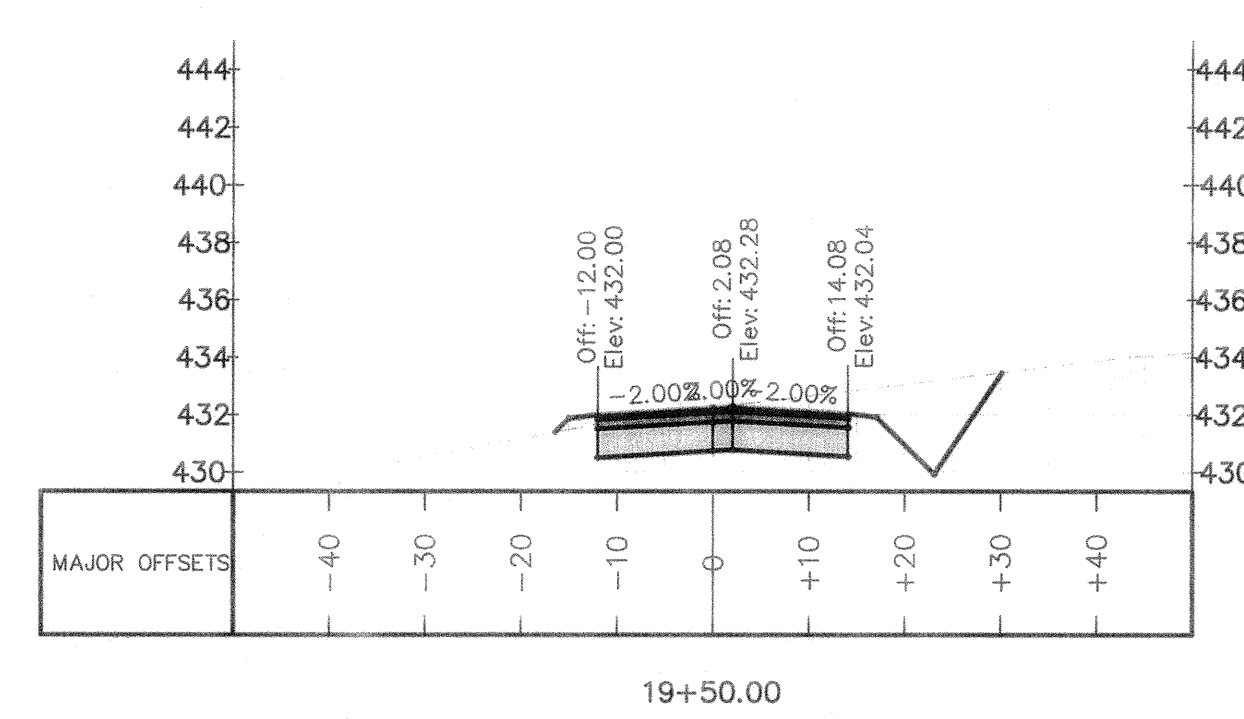
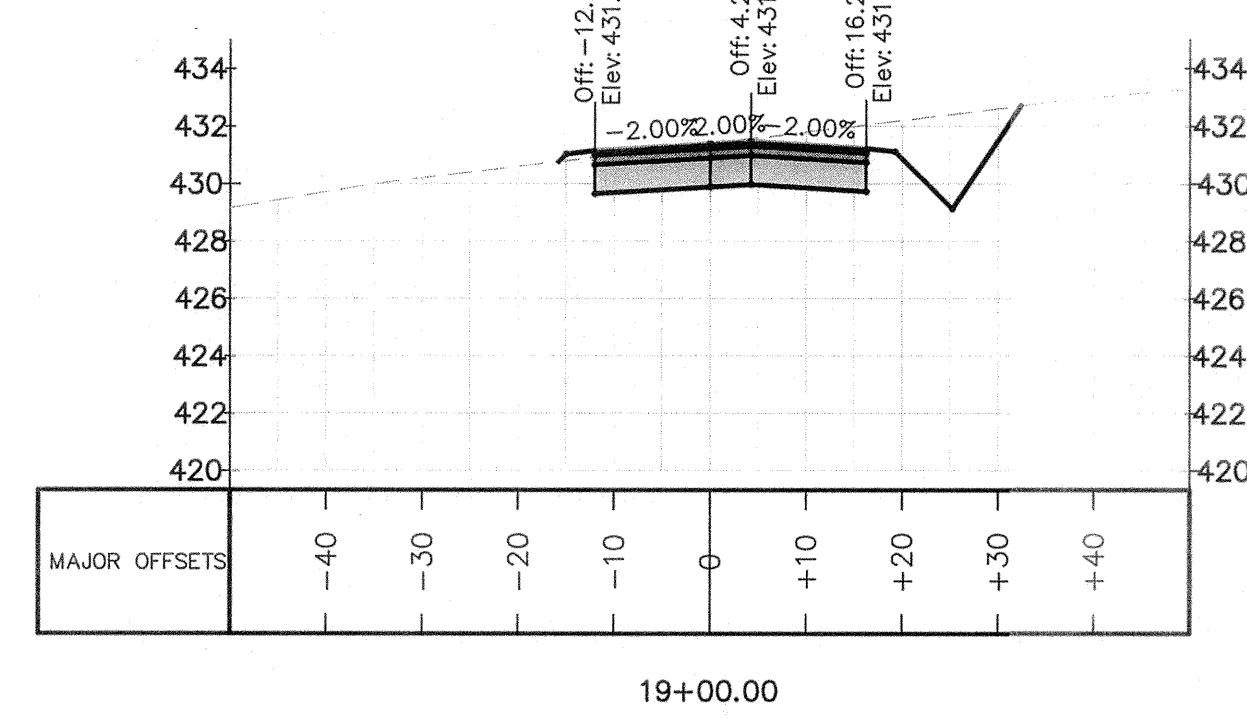
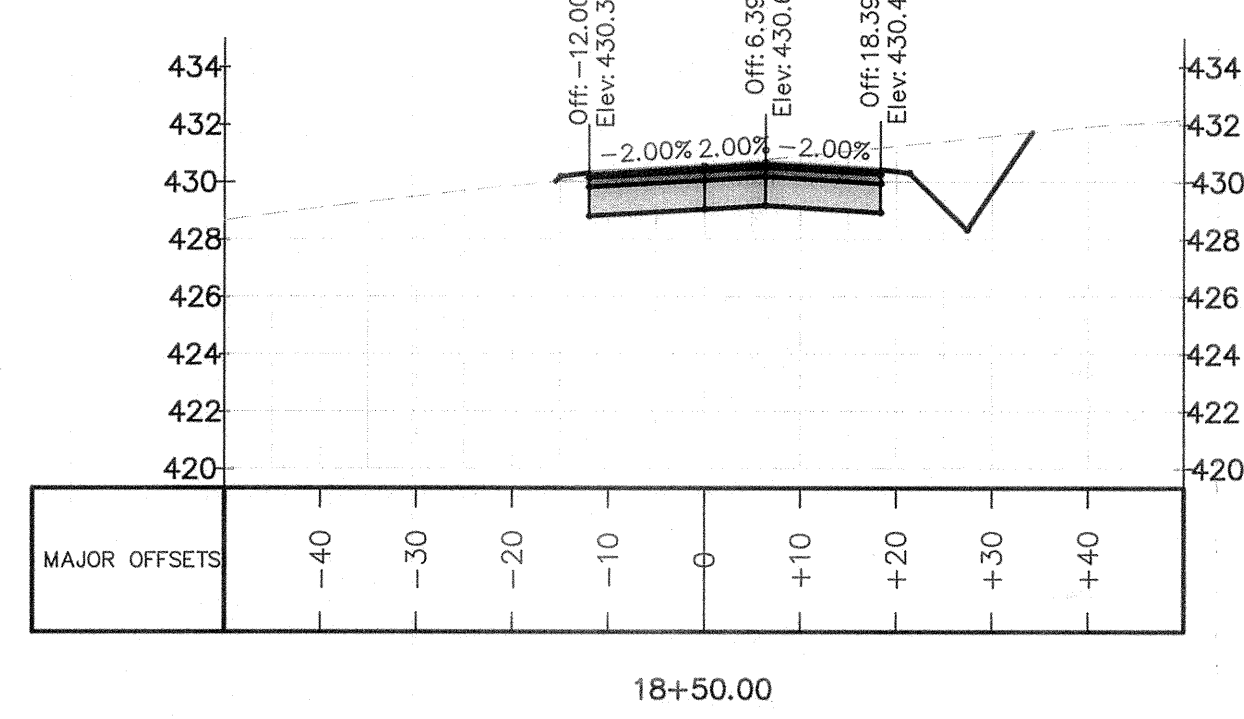
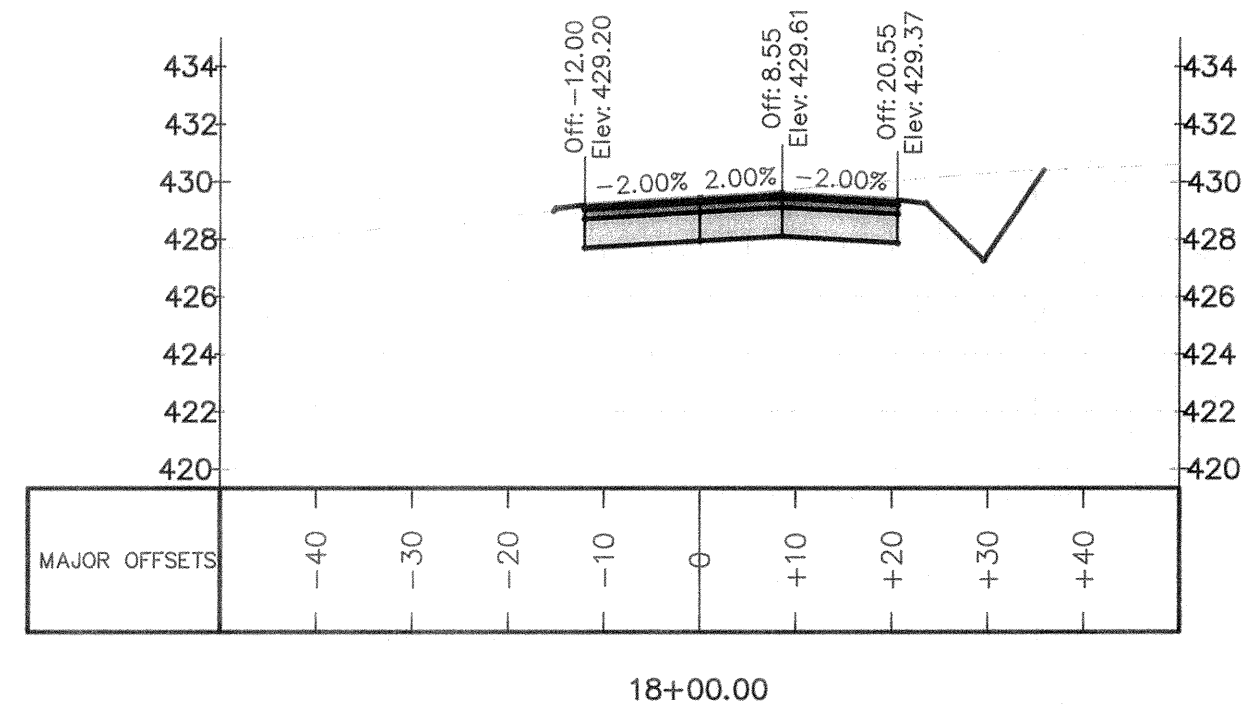
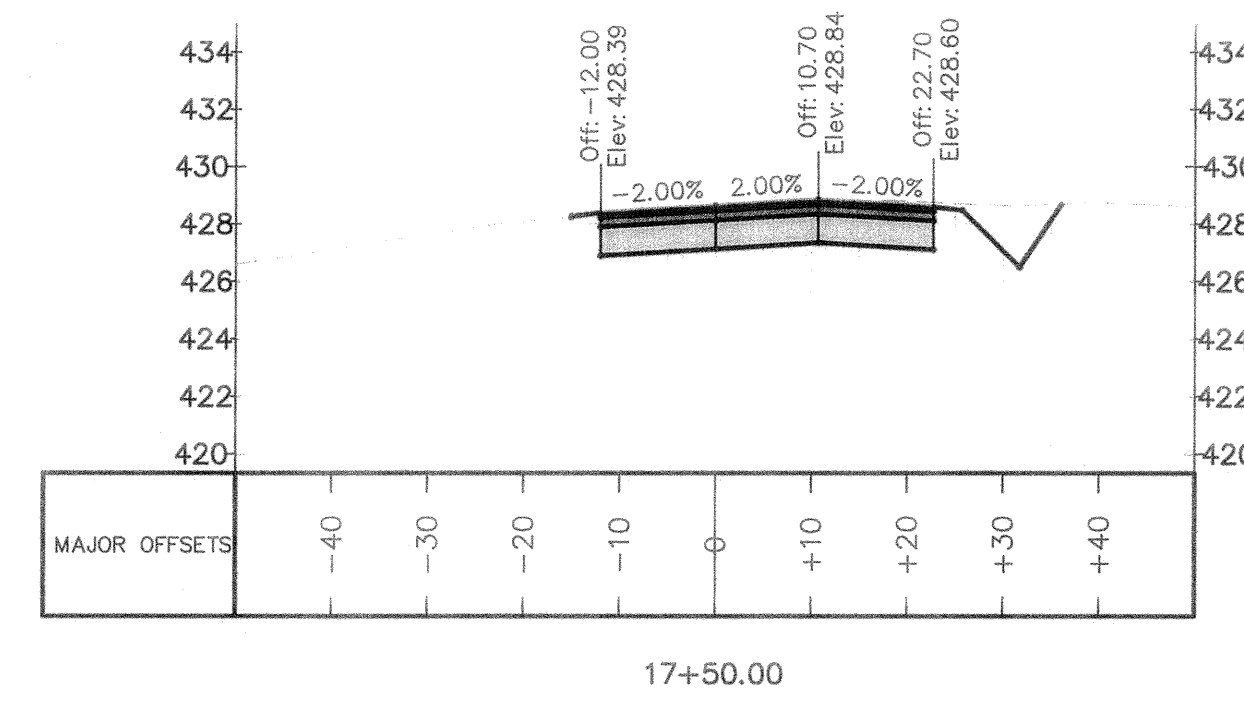
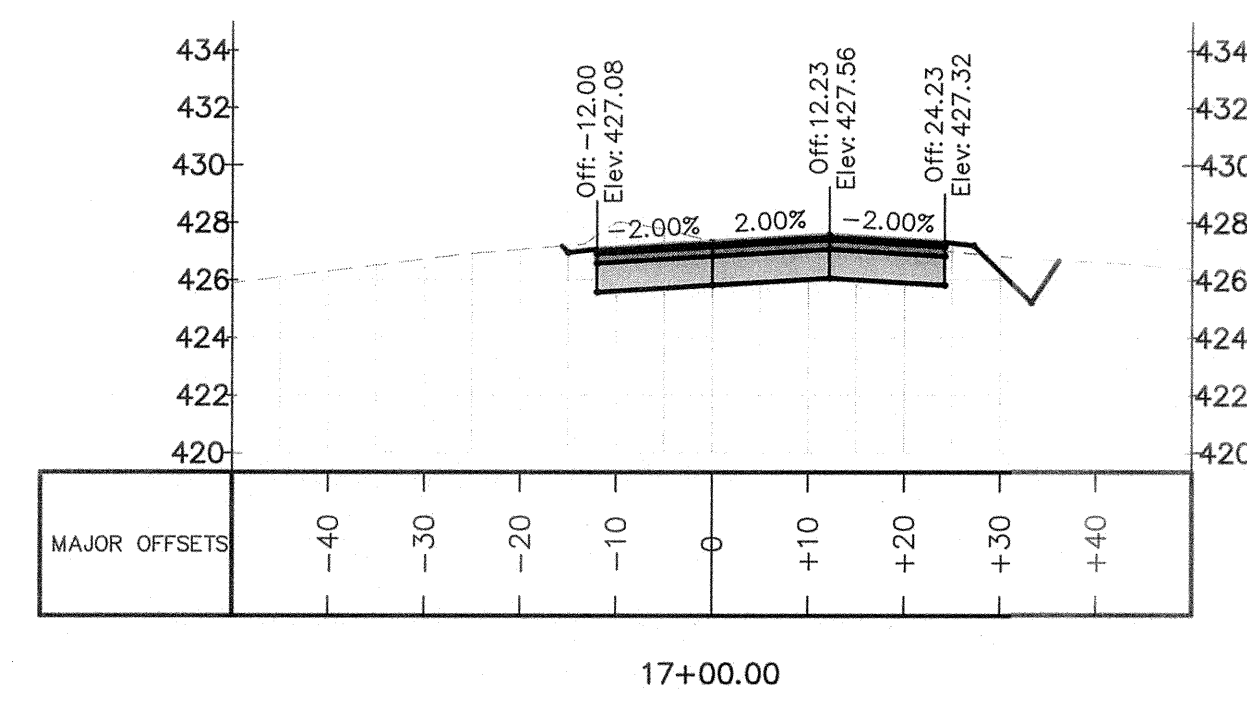
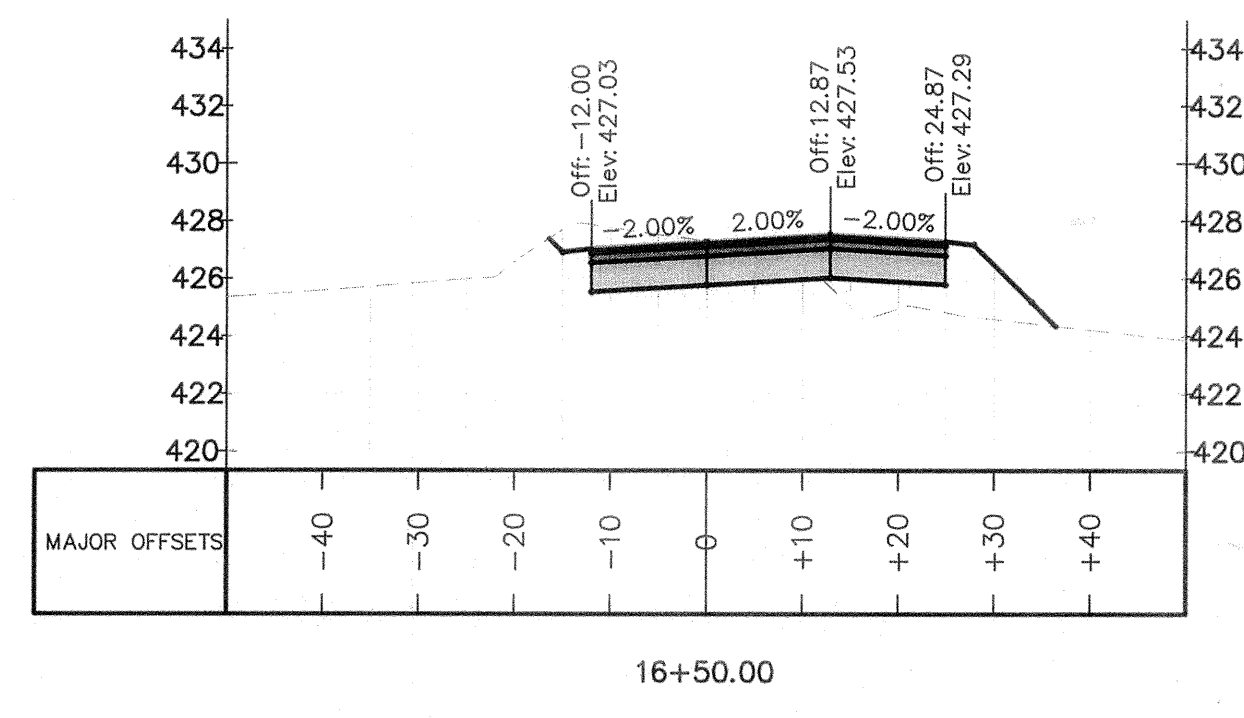
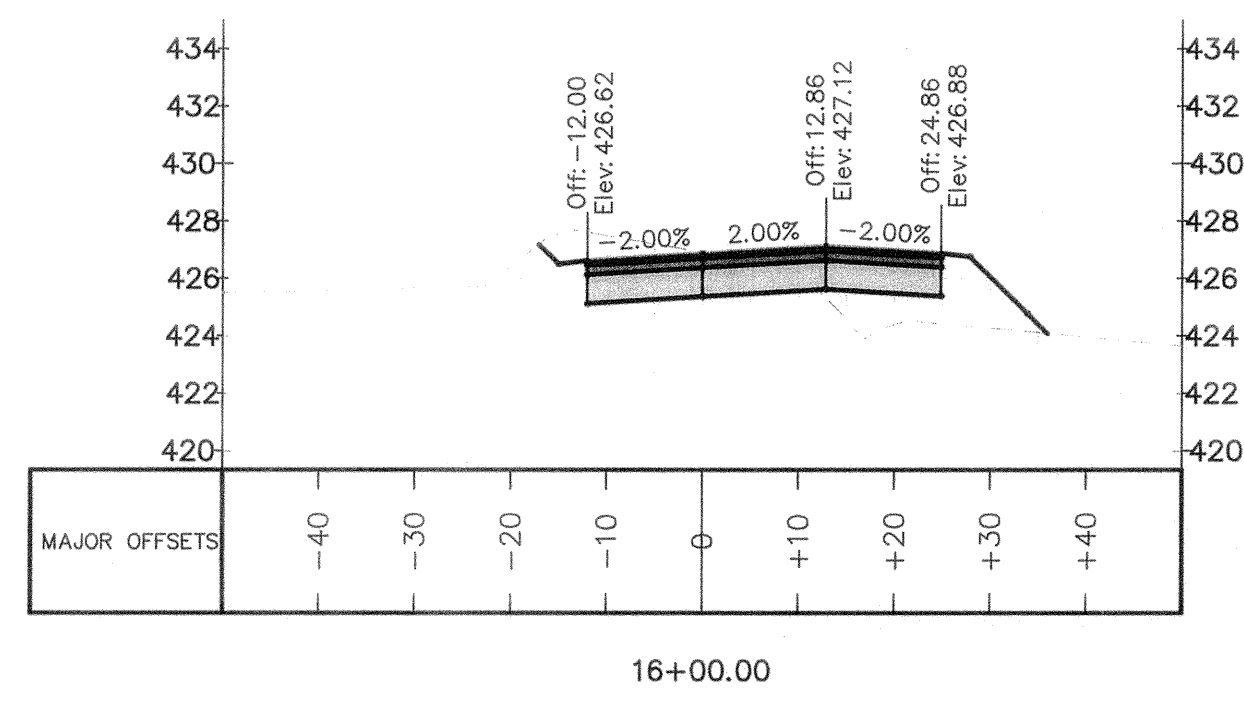
**ELIZABETH HEIGHTS**  
**CONSTRUCTION DRAWINGS**

1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

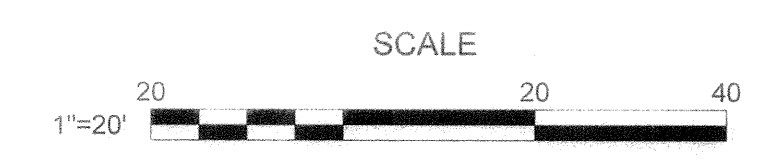
**AVERETTE ROAD**  
**CROSS SECTIONS**

Project Engineer: TSS  
 Designed By: RAJ  
 Drawn By: RAJ  
 Checked By: TSS  
 Scale: NTS  
 Date: 10/30/2018

Project Number: 170348  
 SHEET  
**C704**  
 OF: ---



REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018
REVISIONS		

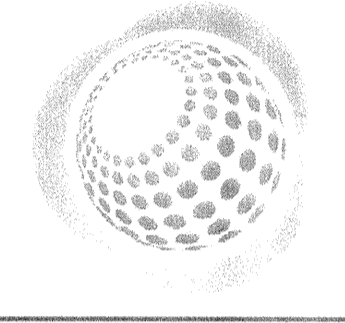


~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~  
 12/07/2018

ELIZABETH HEIGHTS



**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378

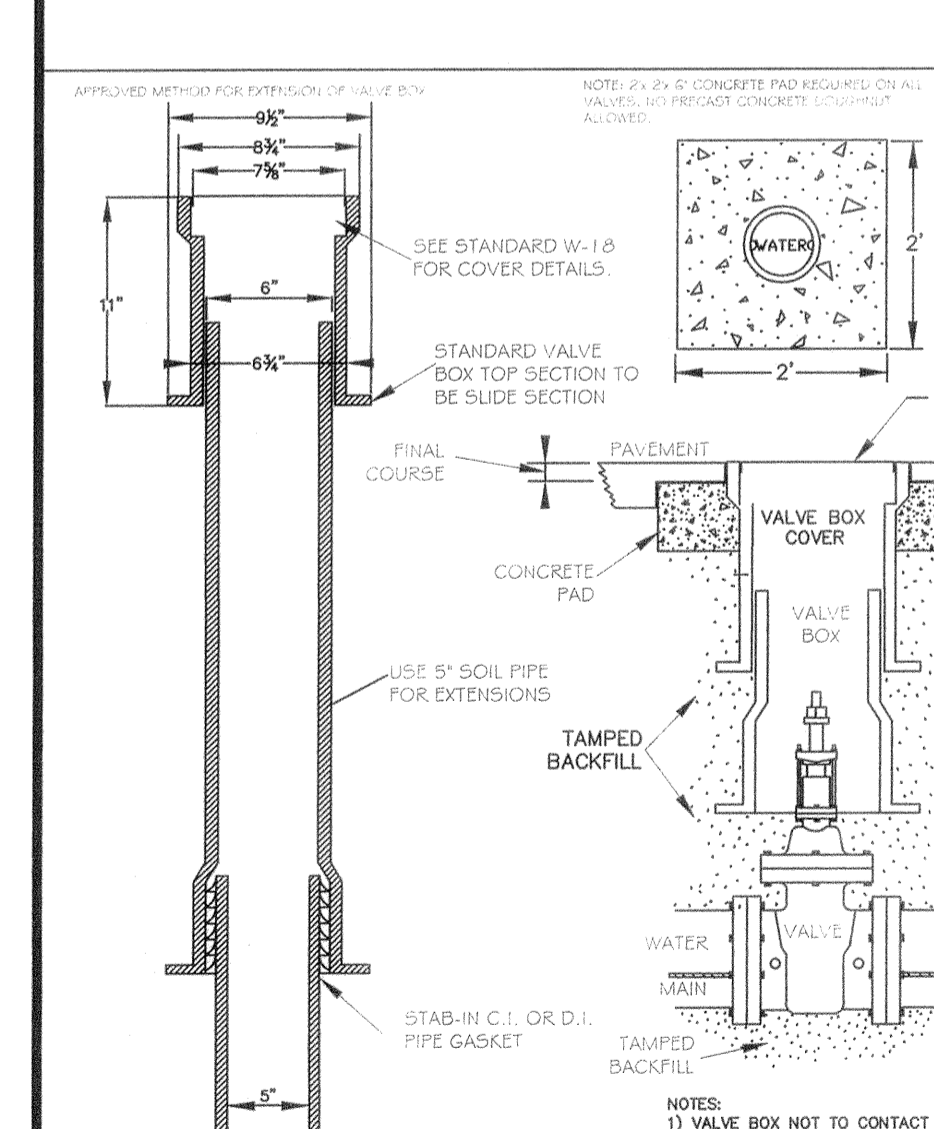
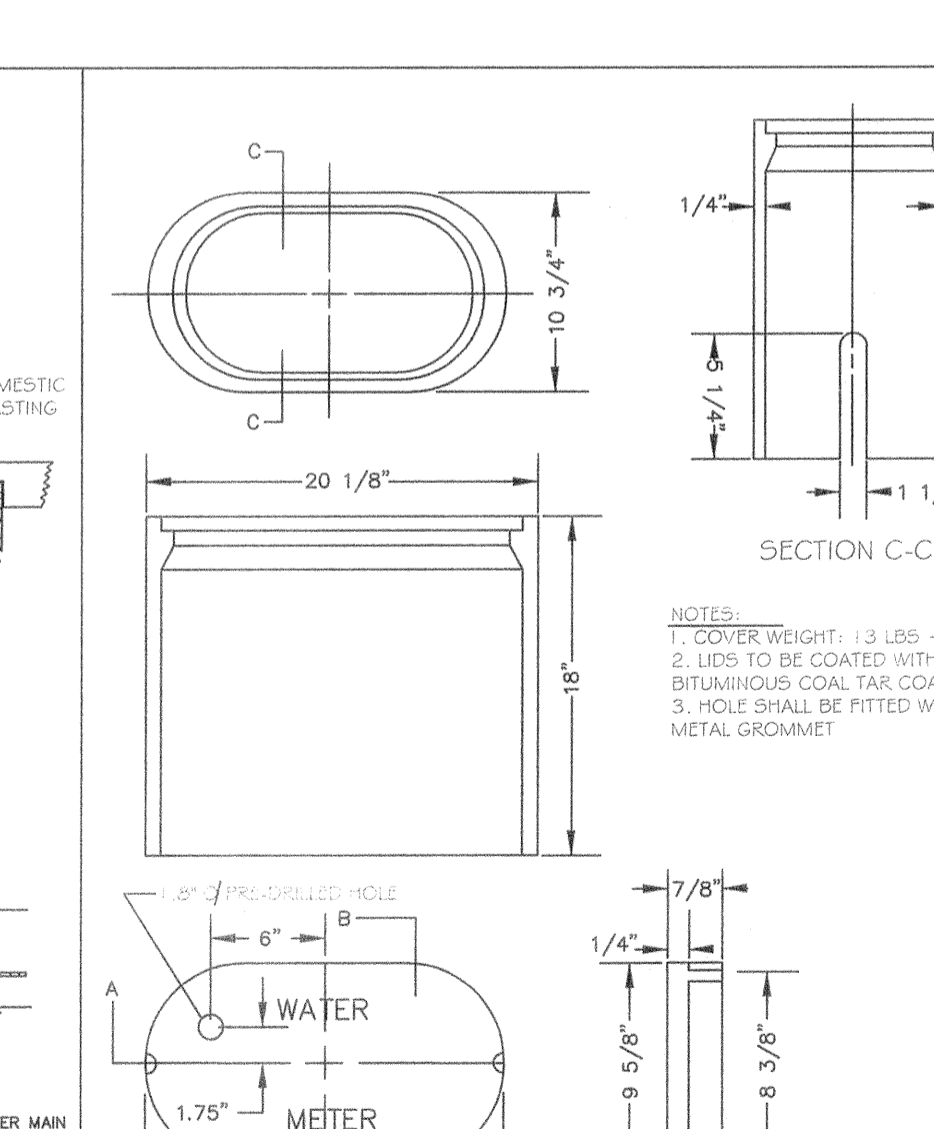
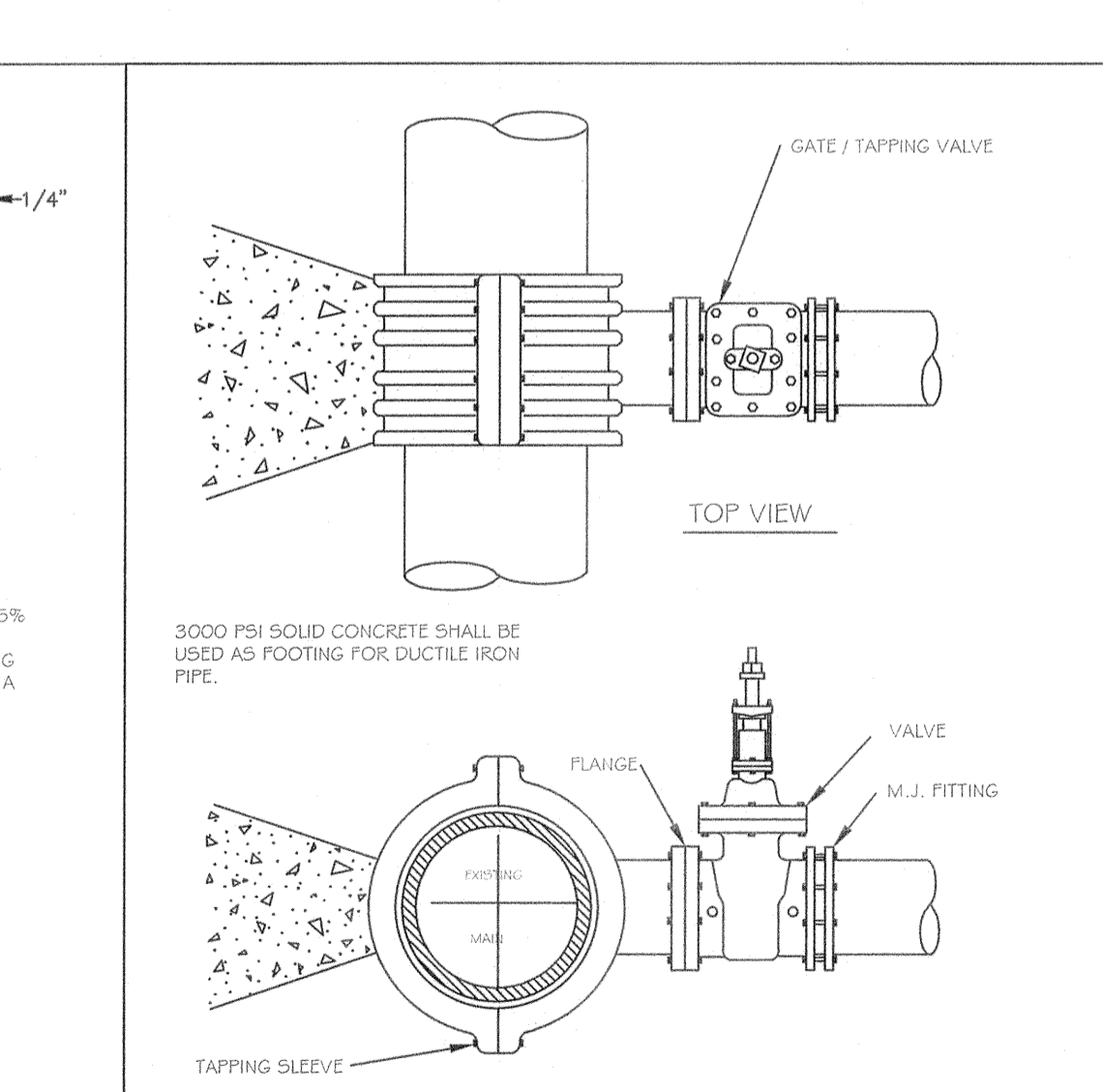
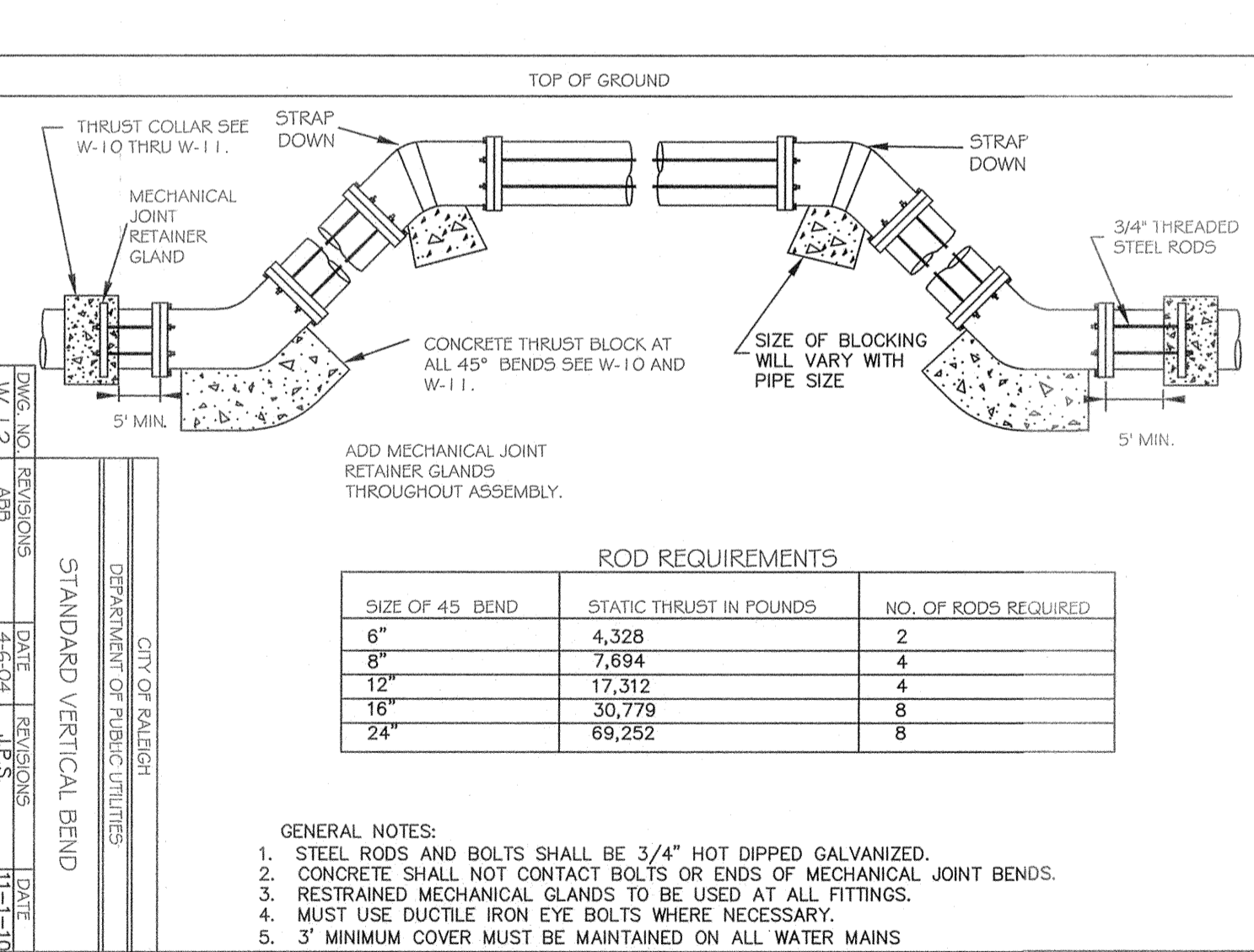
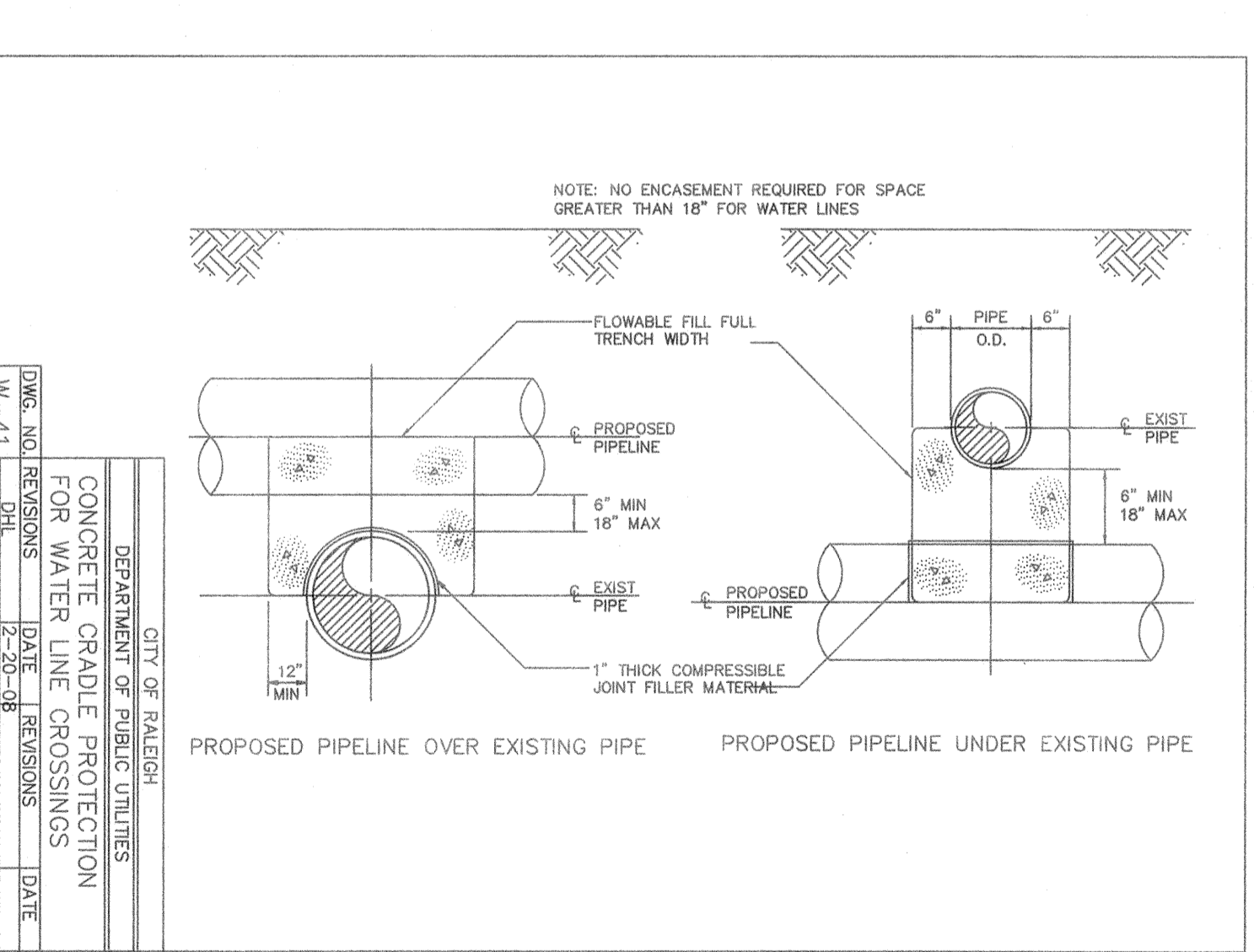
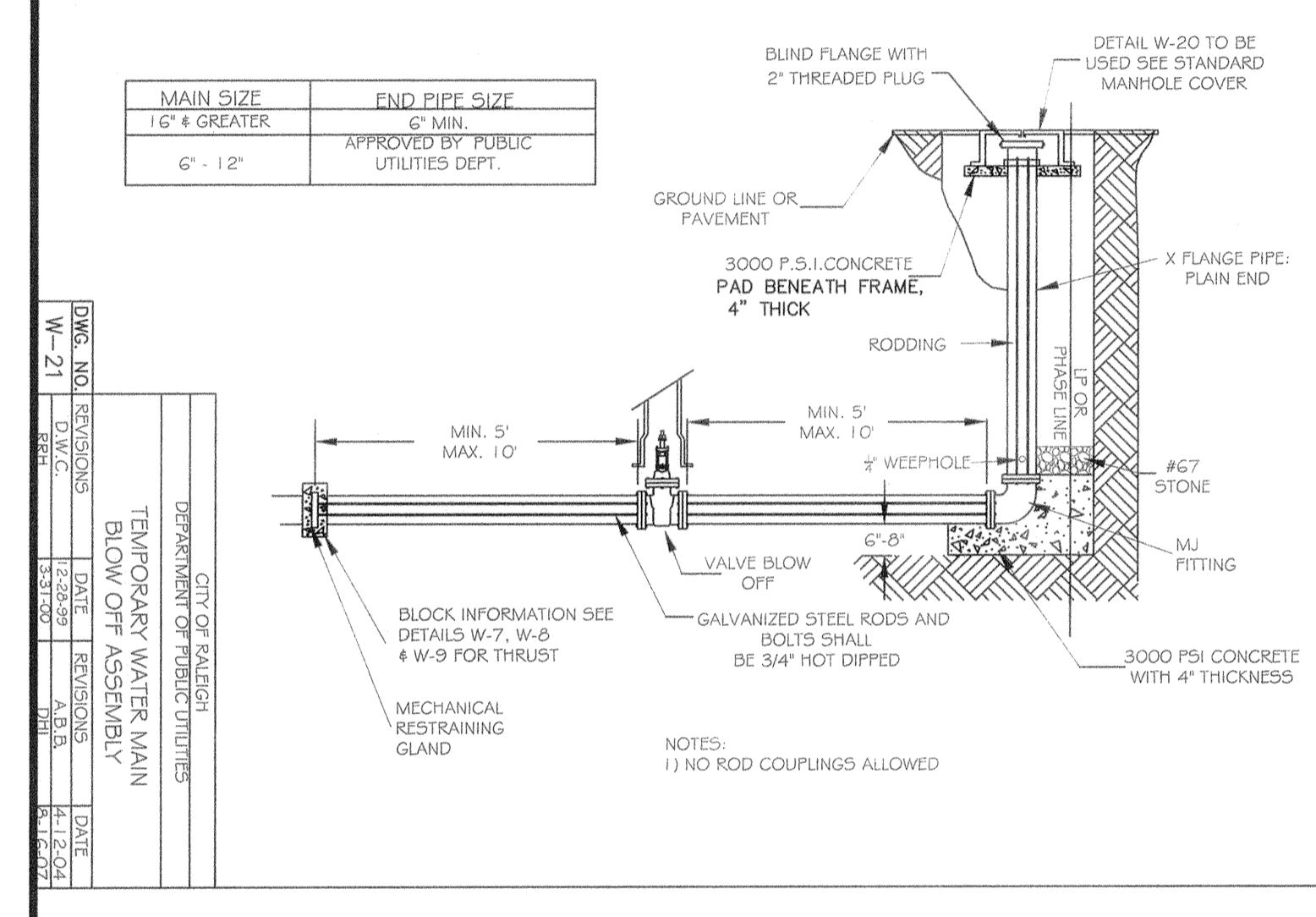
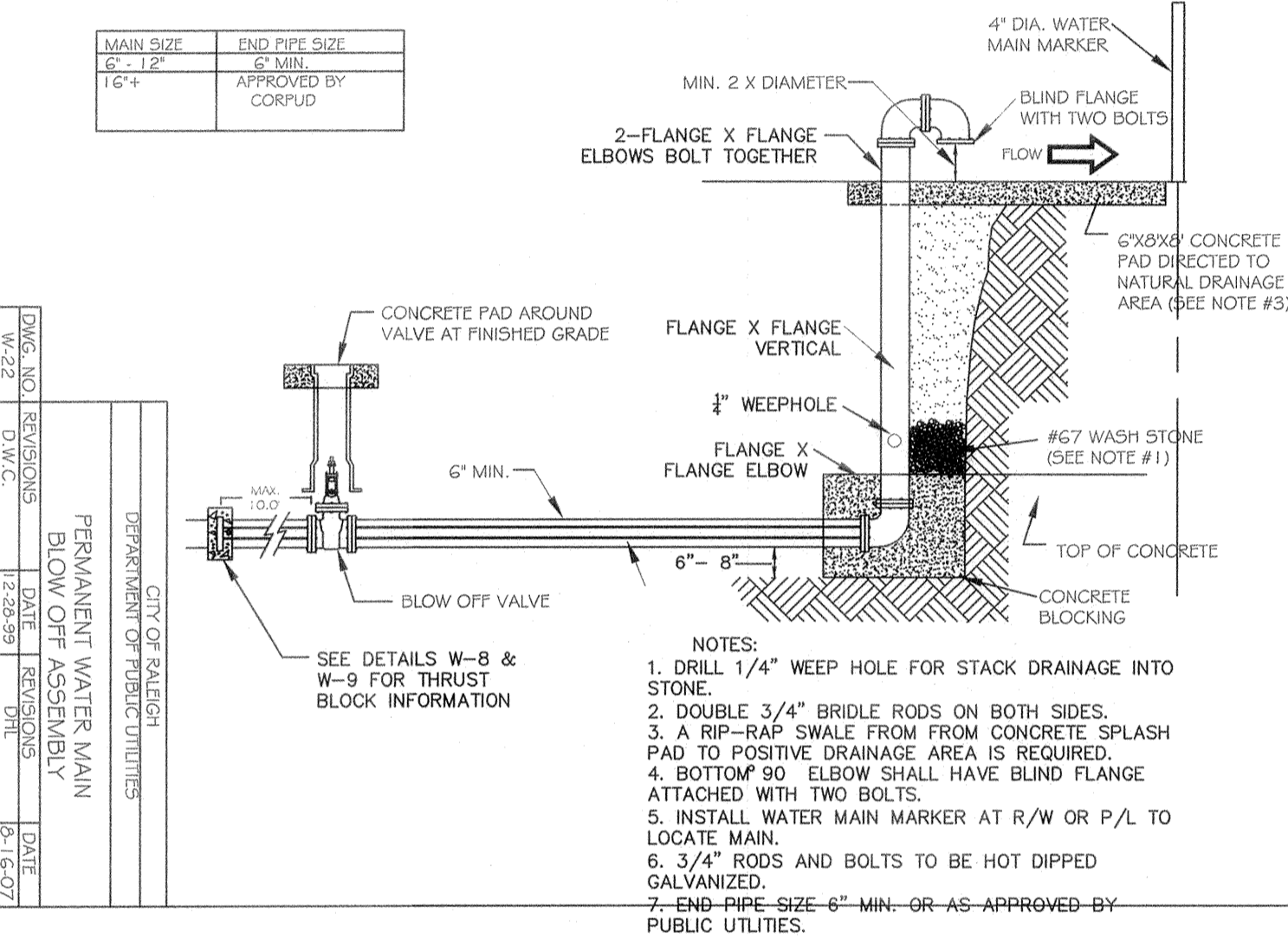
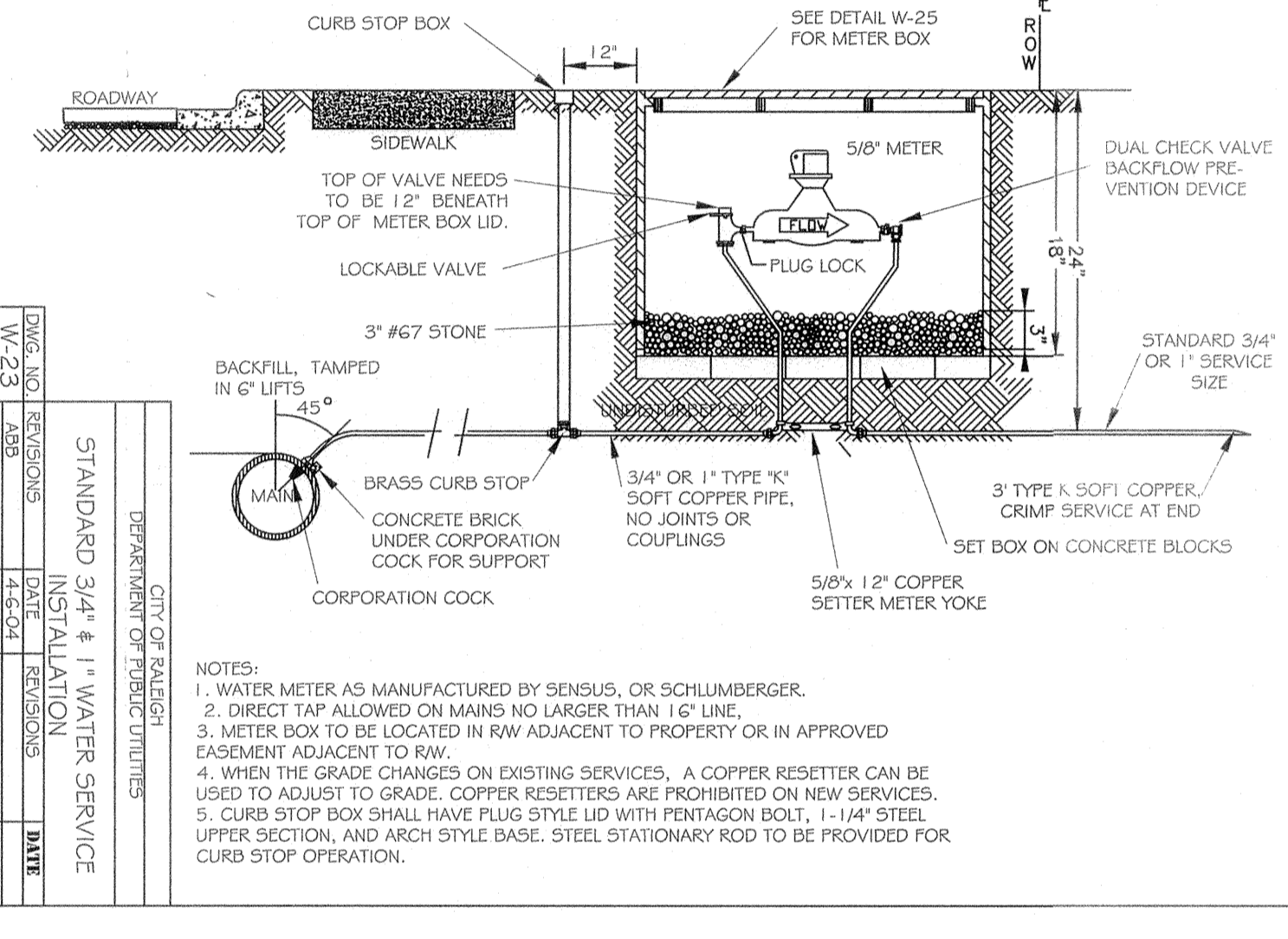
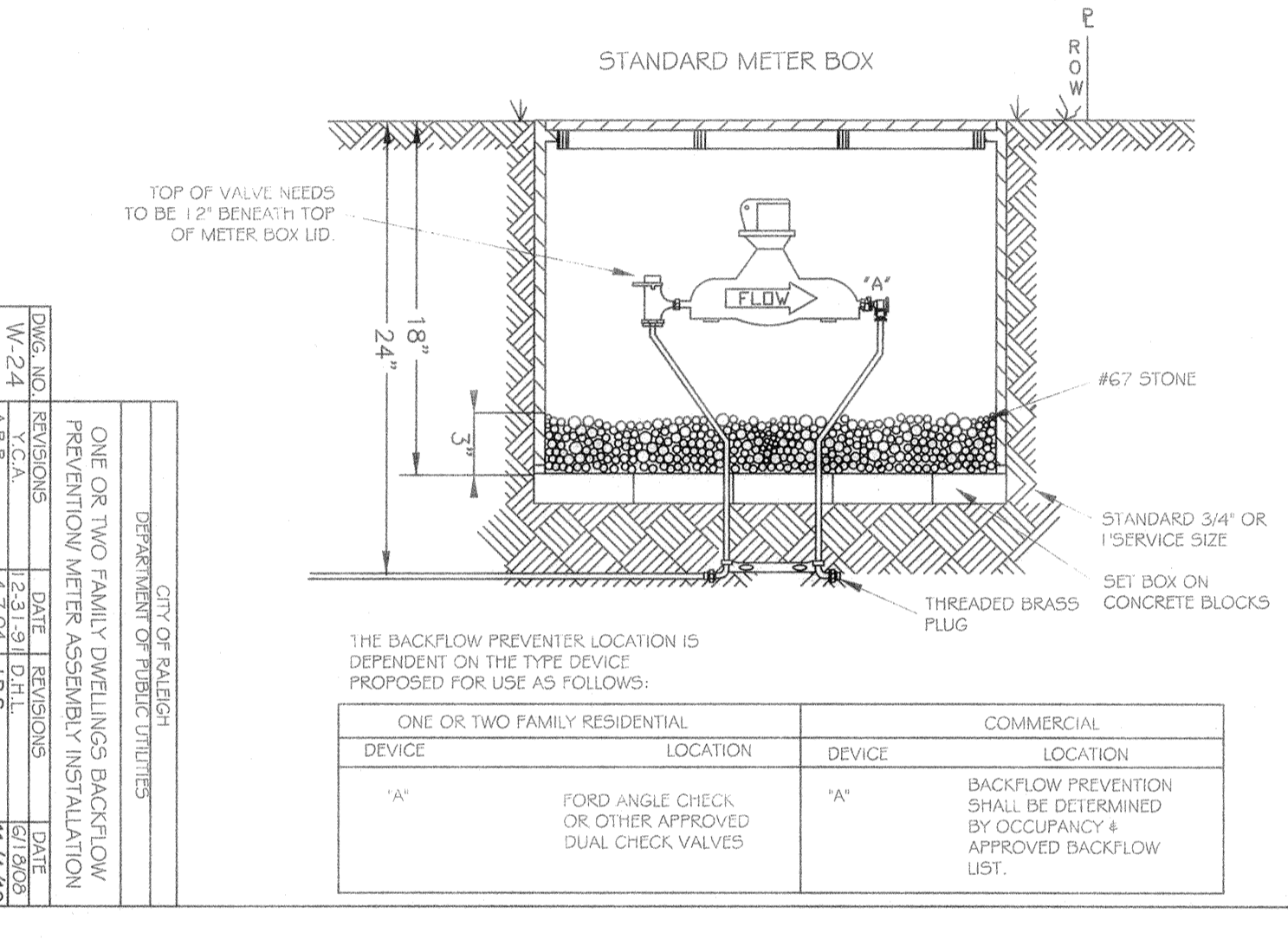
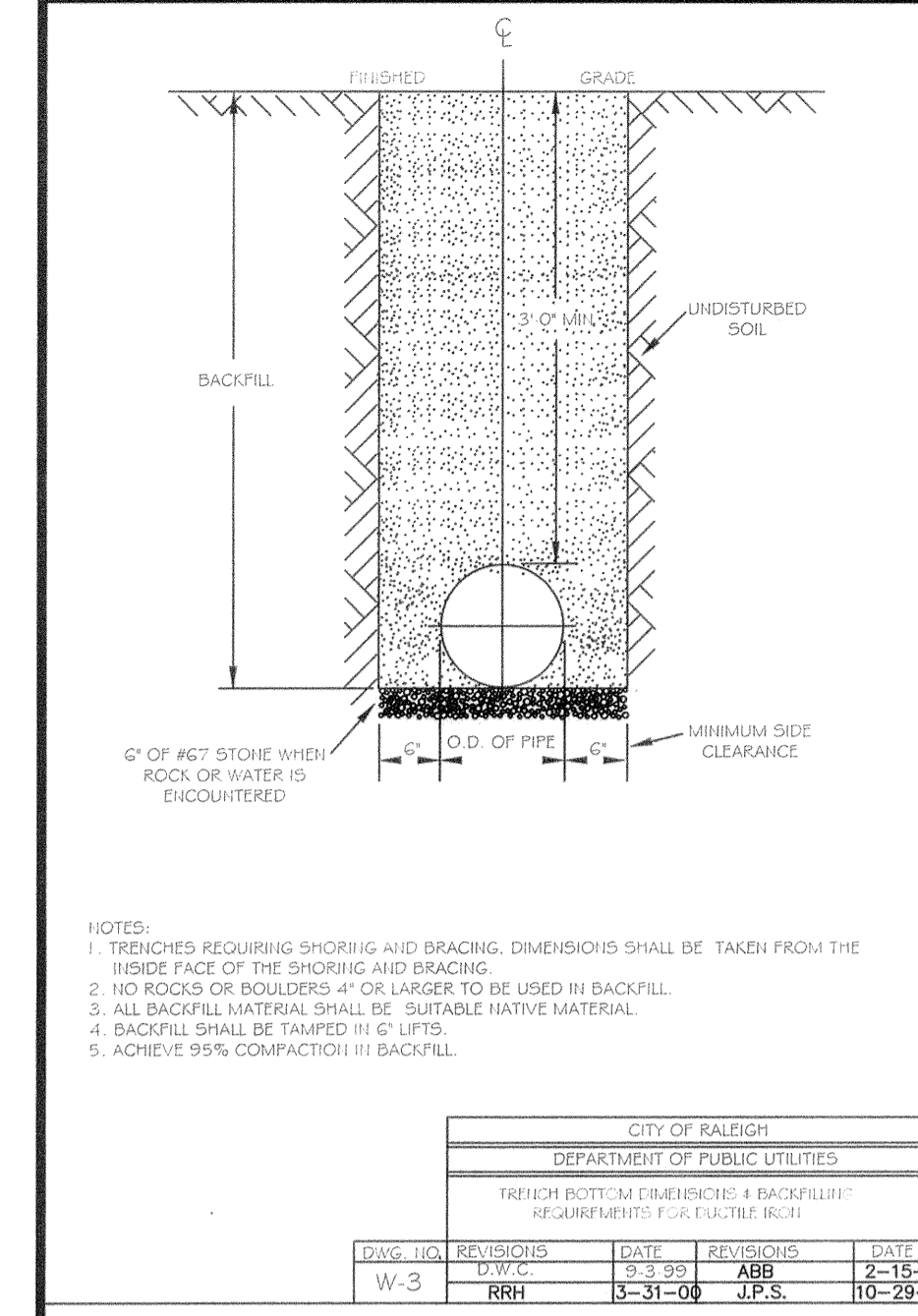
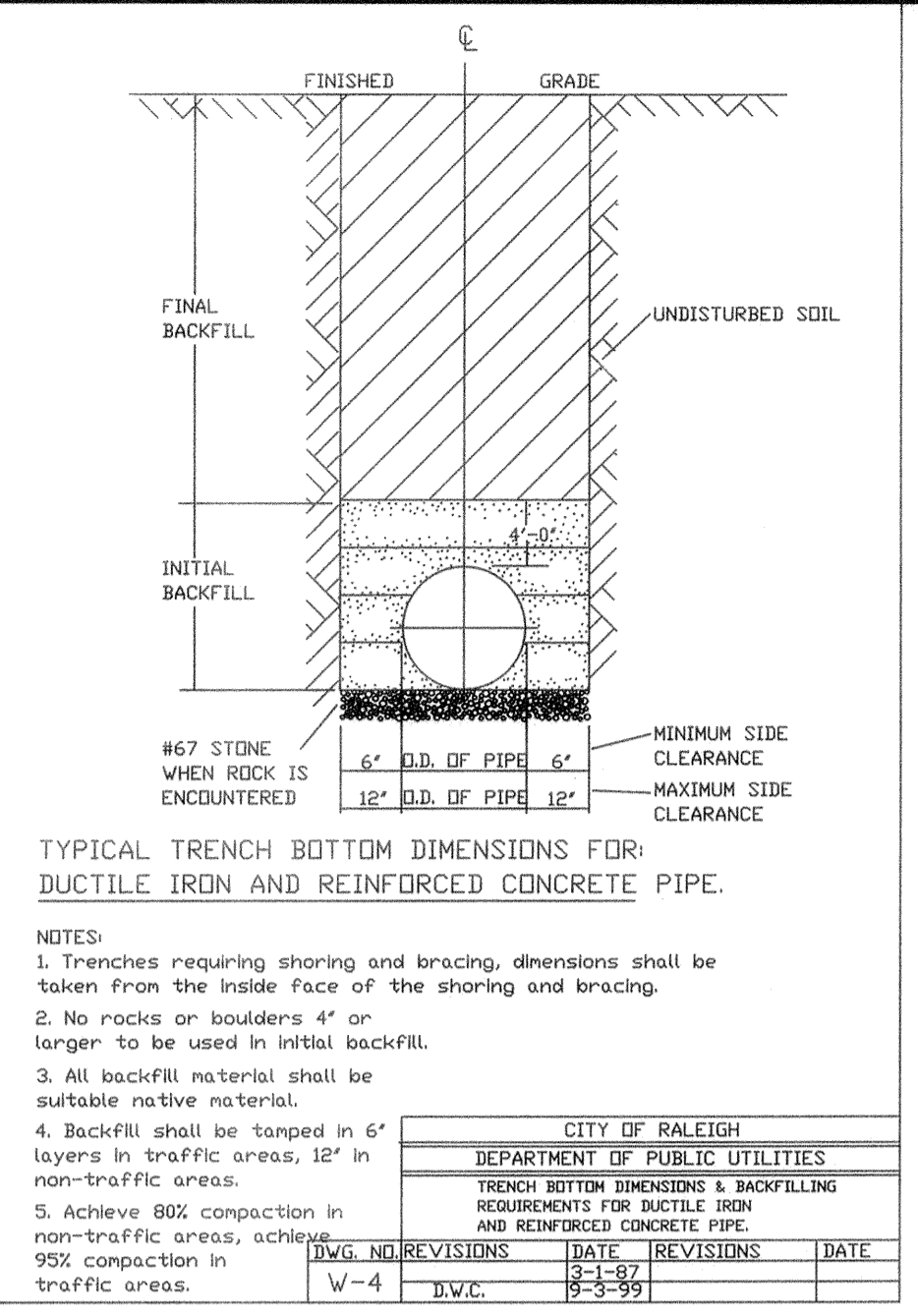
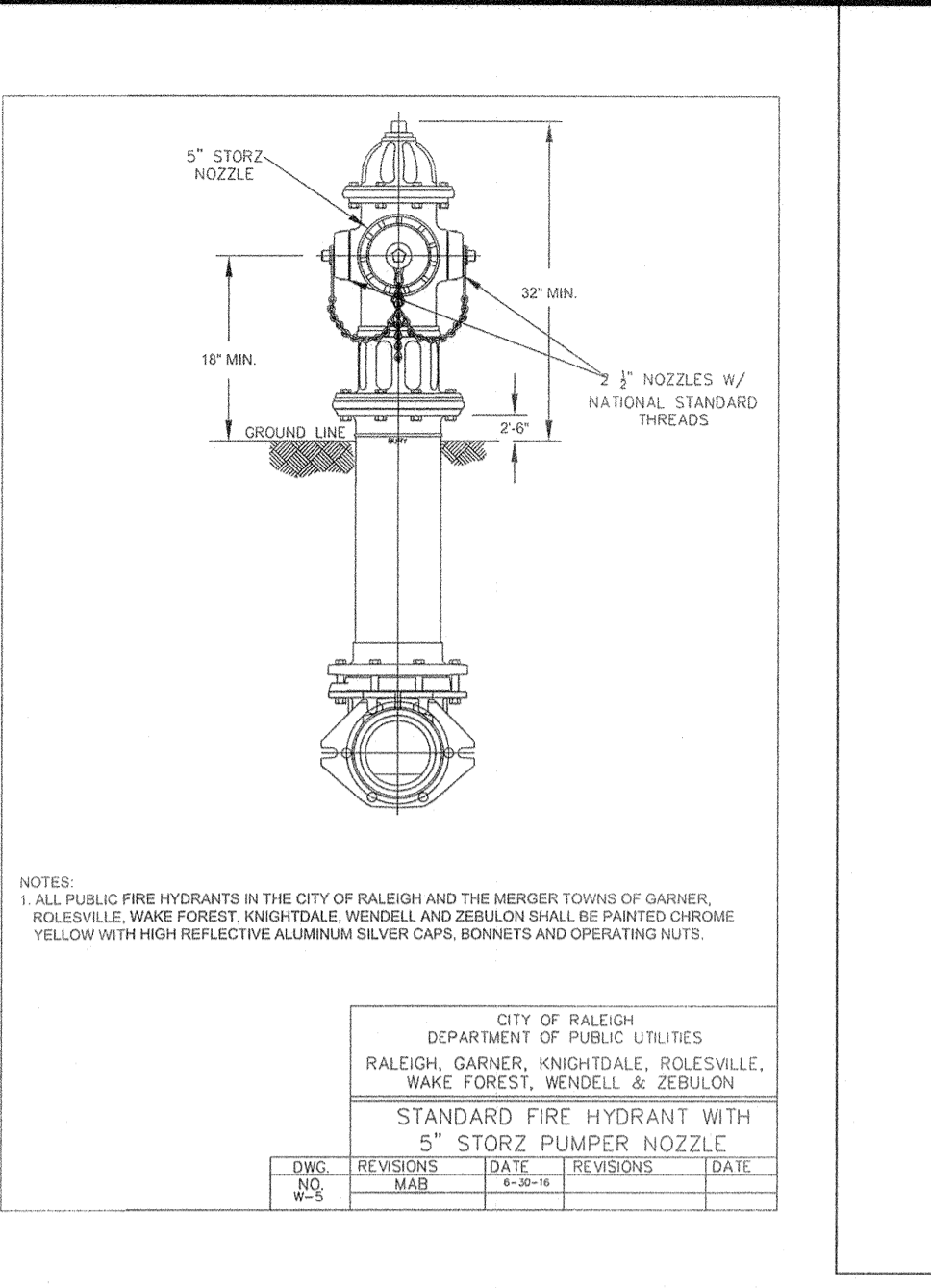
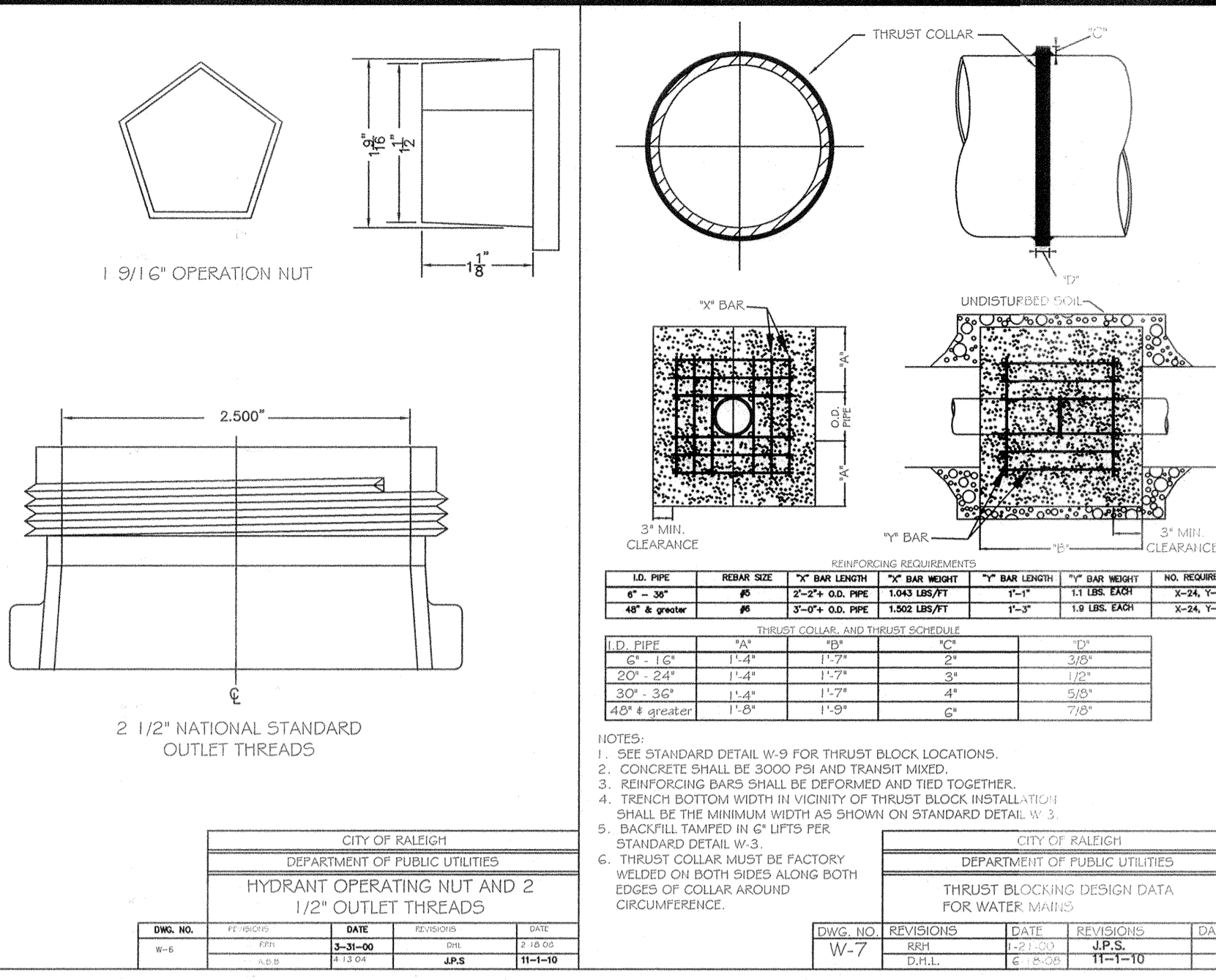
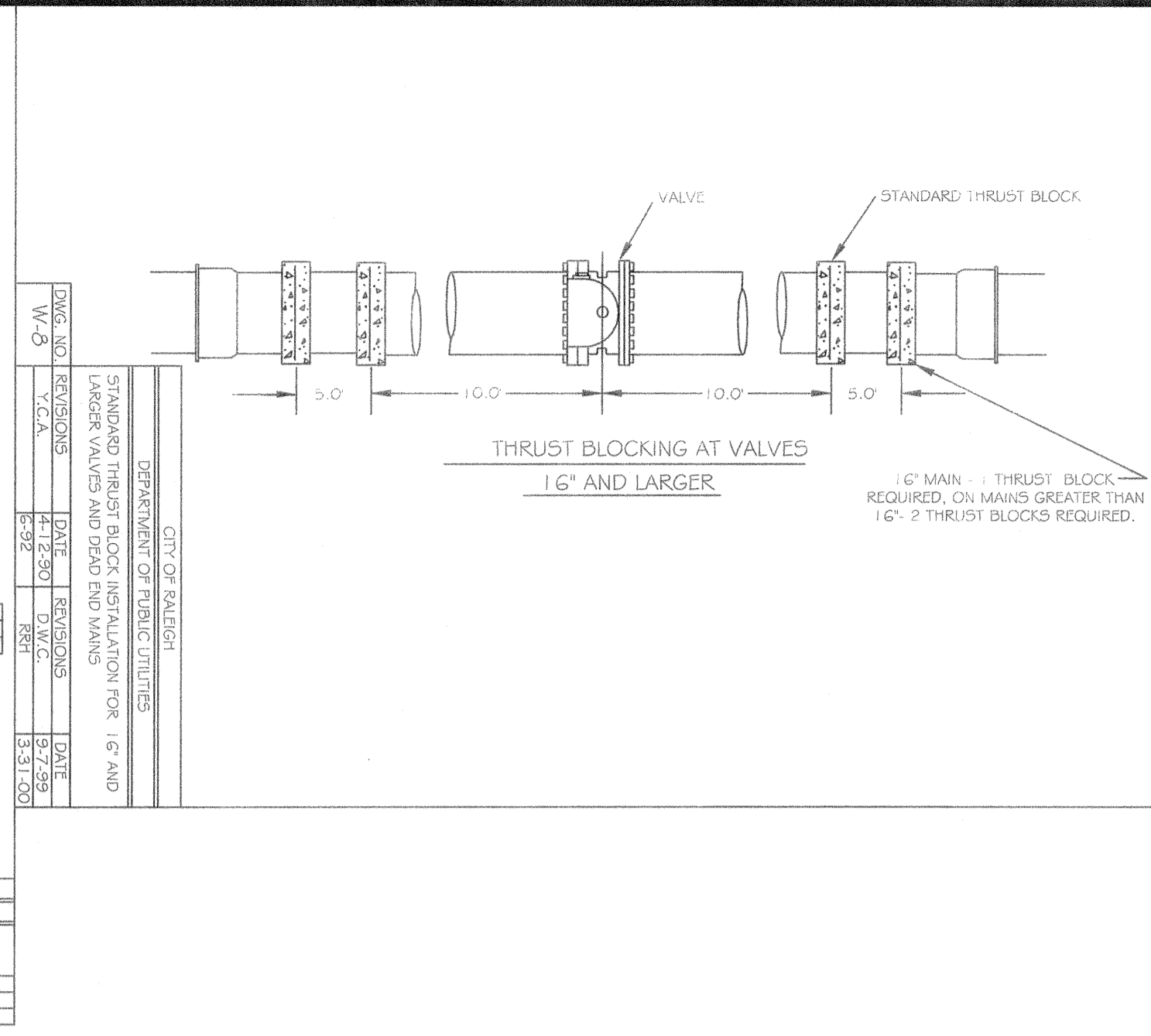


**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**WATER DETAILS**

Project Engineer: TSS  
 Designed By: RAJ  
 Drawn By: RAJ  
 Checked By: TSS  
 Scale: NTS  
 Date: 10/02/2018  
 Project Number: 170348

SHEET  
**C801**



City of Raleigh  
 Public Utilities Department  
 DATE: 4/23/19  
 BY: [Signature]

~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~  
 12/07/2016

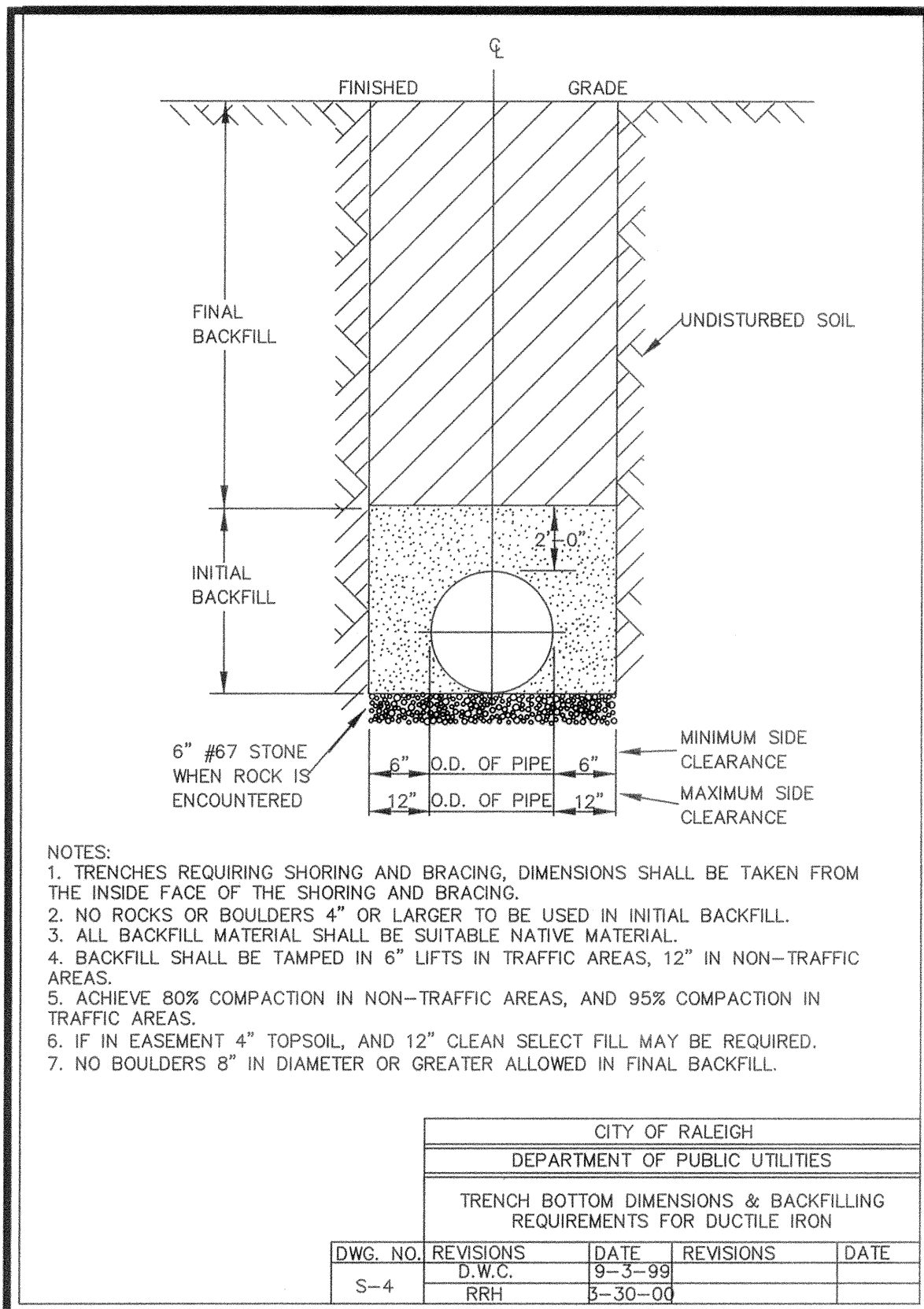
REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES	DATE	REVISIONS	DATE	REVISIONS
W-17	D.W.C.	9-7-99	A.B.B.	8-13-04
	RRH	8-31-00	DR	8-18-07

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES	DATE	REVISIONS	DATE	REVISIONS
W-25	D.W.C.	11-3-99	ABB	1-20-00
	RRH	9-31-00	J.P.S.	11-1-10

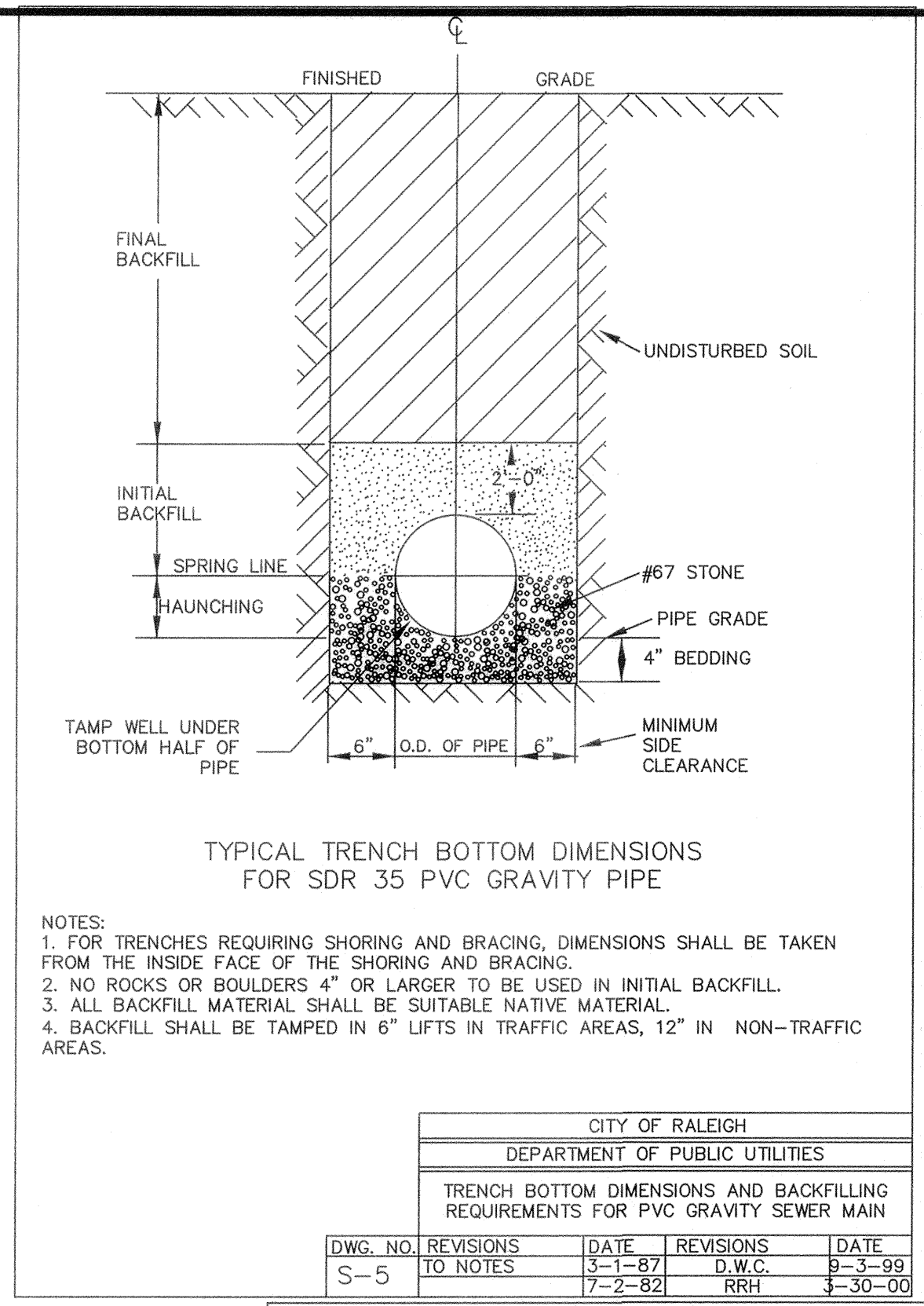
CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES	DATE	REVISIONS	DATE	REVISIONS
W-14	V.C.A.	12-31-99	RRH	3-31-00
	D.W.C.	9-7-99	J.P.S.	11-1-10

SIZE OF 45° BEND	STATIC THRUST IN POUNDS	NO. OF RODS REQUIRED
6"	4,328	2
8"	7,694	4
12"	17,312	4
16"	30,779	8
24"	69,252	8



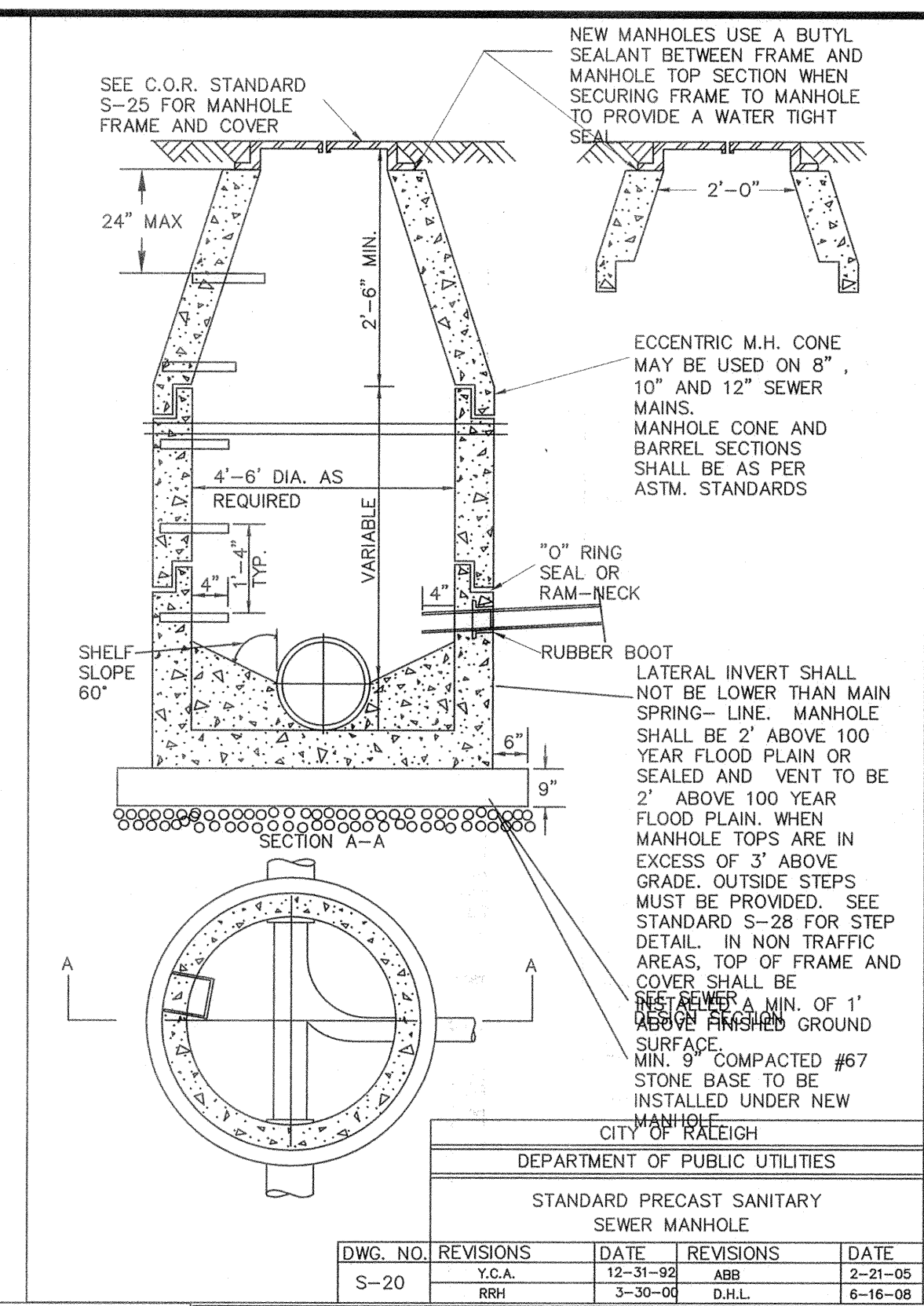
- NOTES:
- TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
  - NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
  - ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
  - BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.
  - ACHIEVE 80% COMPACTION IN NON-TRAFFIC AREAS, AND 95% COMPACTION IN TRAFFIC AREAS.
  - IF IN EASEMENT 4" TOPSOIL, AND 12" CLEAN SELECT FILL MAY BE REQUIRED.
  - NO BOULDERS 8" IN DIAMETER OR GREATER ALLOWED IN FINAL BACKFILL.

CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-4	D.W.C.	9-3-99	
	RRH	6-30-00	



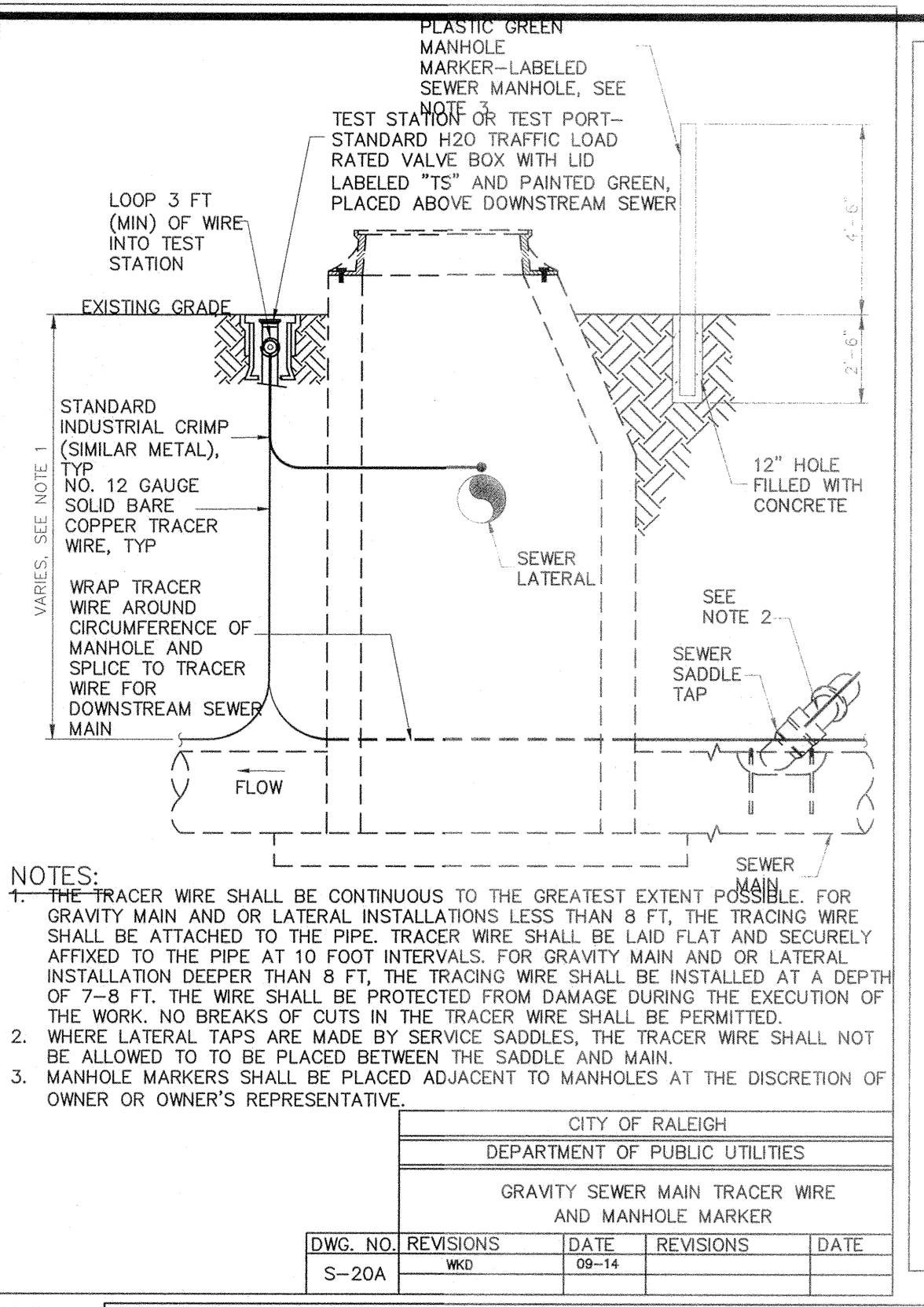
- NOTES:
- FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
  - NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
  - ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
  - BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.

CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR PVC GRAVITY SEWER MAIN			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-5	D.W.C.	9-3-99	
	RRH	3-30-00	



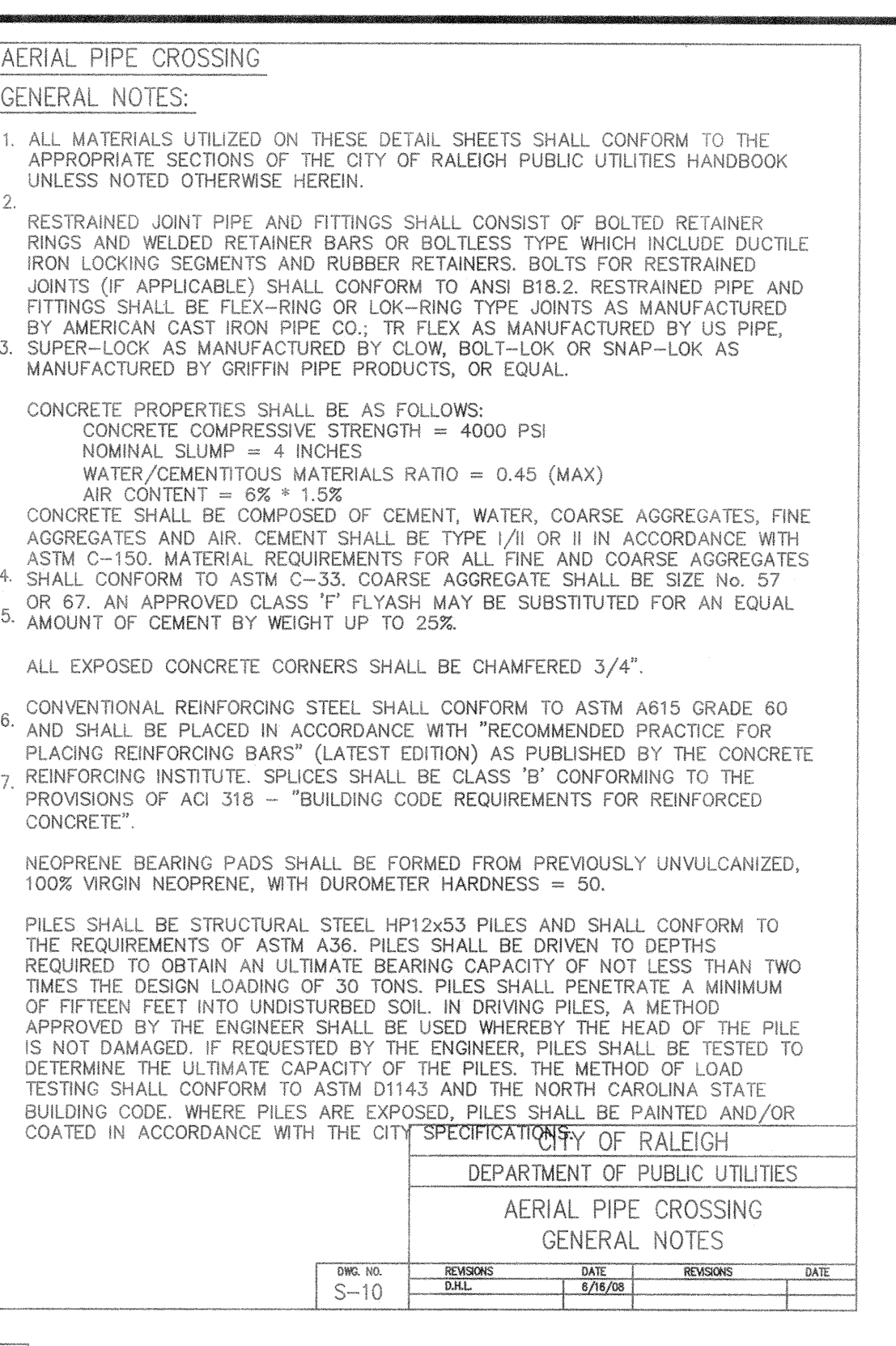
- NOTES:
- THE TRACER WIRE SHALL BE CONTINUOUS TO THE GREATEST EXTENT POSSIBLE FOR GRAVITY MAIN AND OR LATERAL INSTALLATIONS LESS THAN 8 FT. THE TRACING WIRE SHALL BE ATTACHED TO THE PIPE. TRACER WIRE SHALL BE LAID FLAT AND SECURELY AFFIXED TO THE PIPE AT 10 FOOT INTERVALS. FOR GRAVITY MAIN AND OR LATERAL INSTALLATION DEEPER THAN 8 FT. THE TRACING WIRE SHALL BE INSTALLED AT A DEPTH OF 7-8 FT. THE WIRE SHALL BE PROTECTED FROM DAMAGE DURING THE EXECUTION OF THE WORK. NO BREAKS OF CUTS IN THE TRACER WIRE SHALL BE PERMITTED.
  - WHERE LATERAL TAPS ARE MADE BY SERVICE SADDLES, THE TRACER WIRE SHALL NOT BE ALLOWED TO BE PLACED BETWEEN THE SADDLE AND MAIN.
  - MANHOLE MARKERS SHALL BE PLACED ADJACENT TO MANHOLES AT THE DISCRETION OF OWNER OR OWNER'S REPRESENTATIVE.

CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
STANDARD PRECAST SANITARY SEWER MANHOLE			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-20	Y.C.A.	12-31-92	
	RRH	3-30-00	
	D.H.L.	6-16-08	



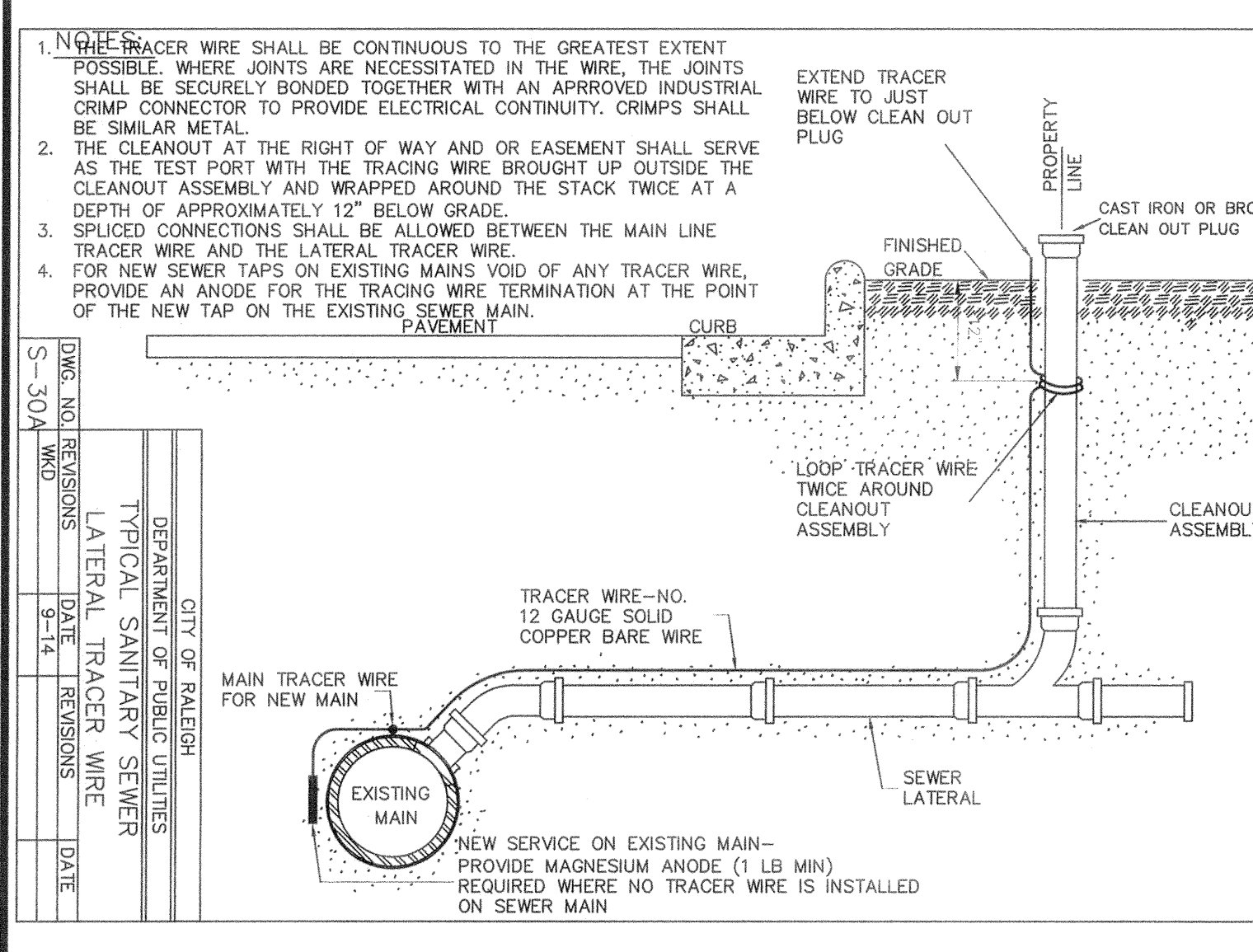
- NOTES:
- ALL MATERIALS UTILIZED ON THESE DETAIL SHEETS SHALL CONFORM TO THE APPROPRIATE SECTIONS OF THE CITY OF RALEIGH PUBLIC UTILITIES HANDBOOK UNLESS NOTED OTHERWISE HEREIN.
  - RESTRAINED JOINT PIPE AND FITTINGS SHALL CONSIST OF BOLTED RETAINER RINGS AND WELDED RETAINER BARS OR BOLTLESS TYPE WHICH INCLUDE DUCTILE IRON LOCKING SEGMENTS AND RUBBER RETAINERS. BOLTS FOR RESTRAINED JOINTS (IF APPLICABLE) SHALL CONFORM TO ANSI B18.2. RESTRAINED PIPE AND FITTINGS SHALL BE FLEX-RING OR LOK-RING TYPE JOINTS AS MANUFACTURED BY AMERICAN CAST IRON PIPE CO., TR FLEX AS MANUFACTURED BY US PIPE, SUPER-LOK AS MANUFACTURED BY CLOW, BOLT-LOK OR SNAP-LOK AS MANUFACTURED BY GRIFFIN PIPE PRODUCTS, OR EQUAL.

CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
GRAVITY SEWER MAIN TRACER WIRE AND MANHOLE MARKER			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-20A	W.K.D.	09-14	

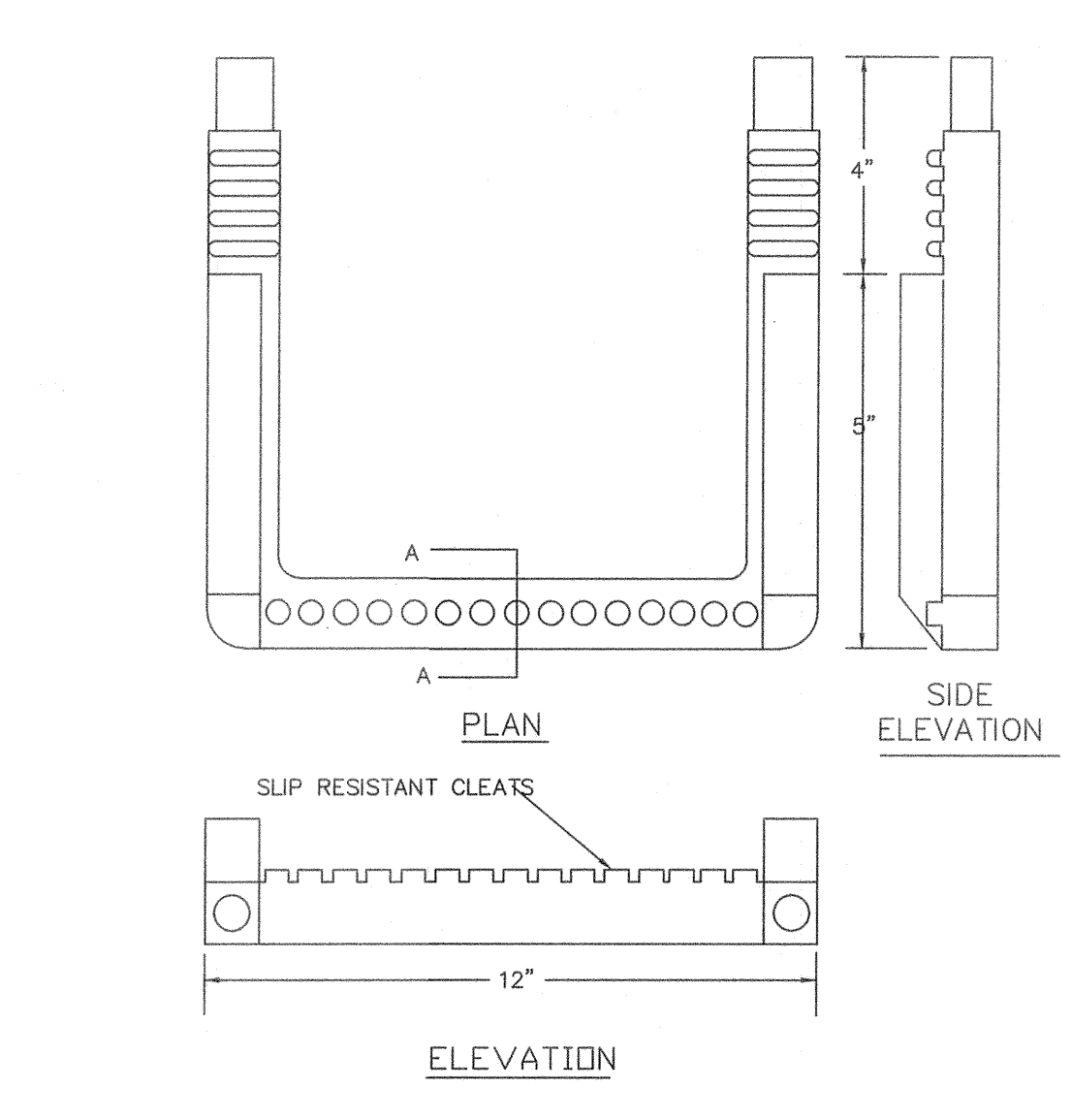


- CONCRETE COMPRESSIVE STRENGTH = 4000 PSI  
 NOMINAL SLUMP = 4 INCHES  
 WATER/CEMENTITIOUS MATERIALS RATIO = 0.45 (MAX)  
 AIR CONTENT = 6% + 1.5%

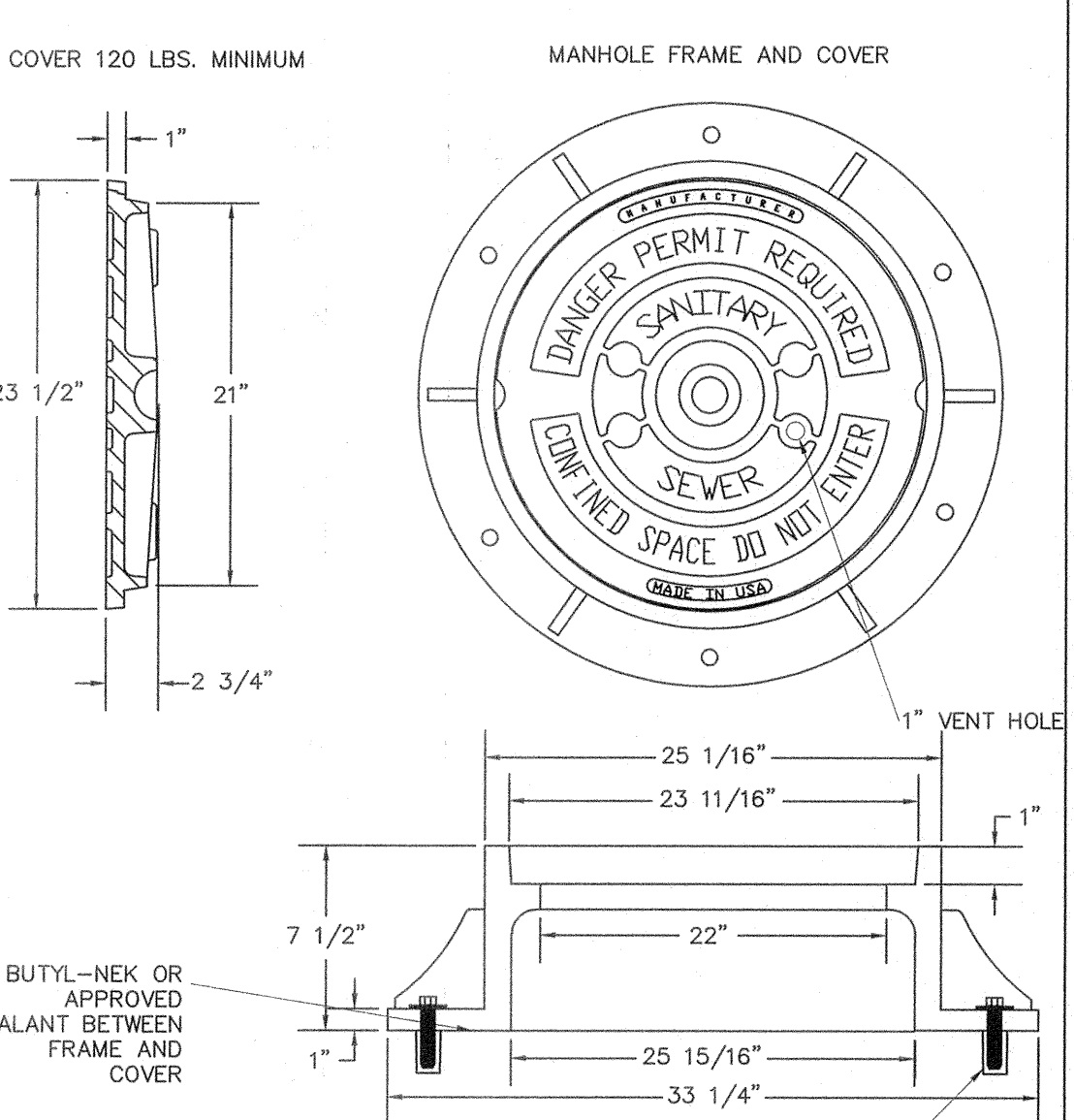
CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
AERIAL PIPE CROSSING GENERAL NOTES			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-10			



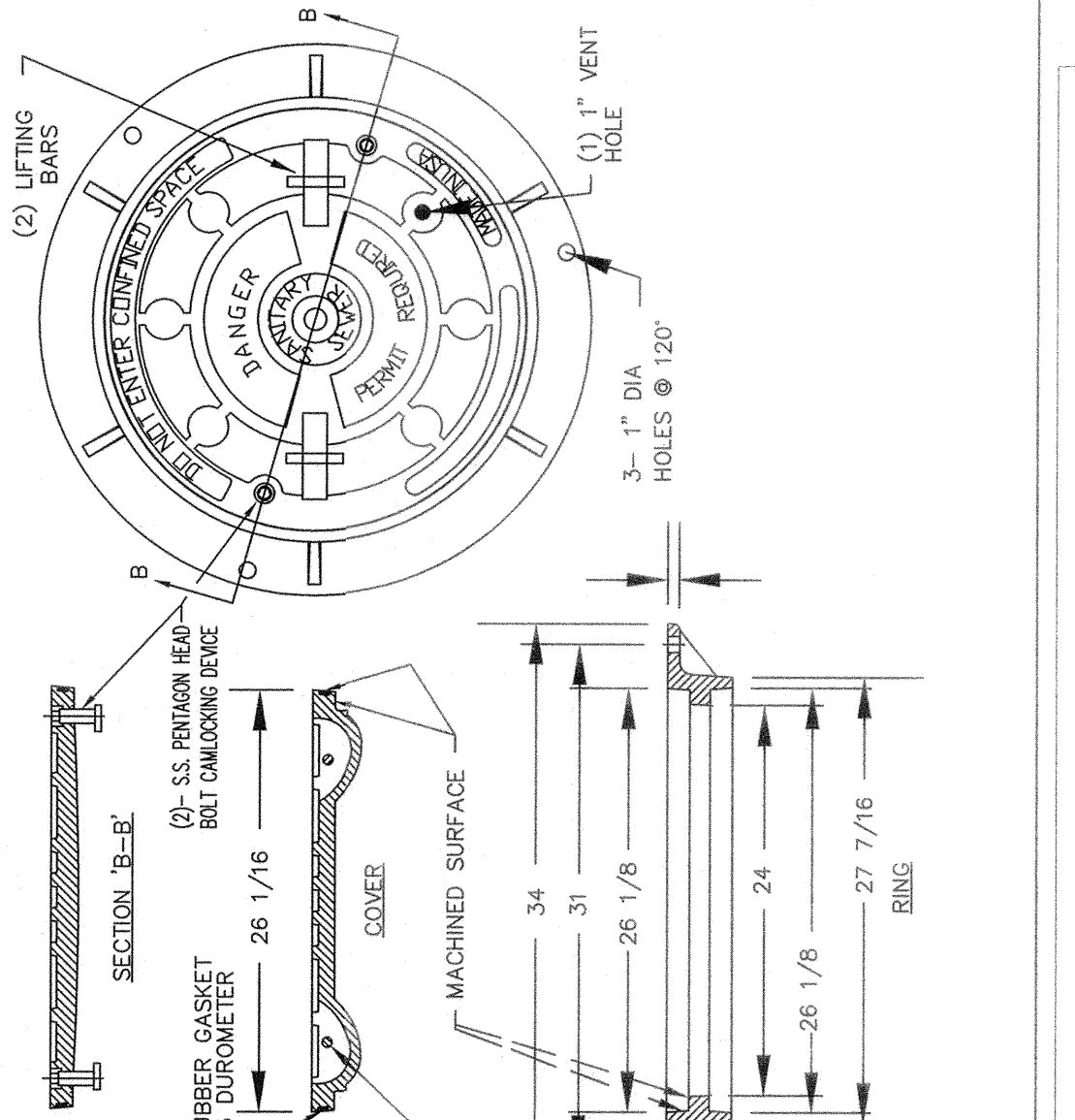
CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
LATERAL SANITARY SEWER			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-30A			



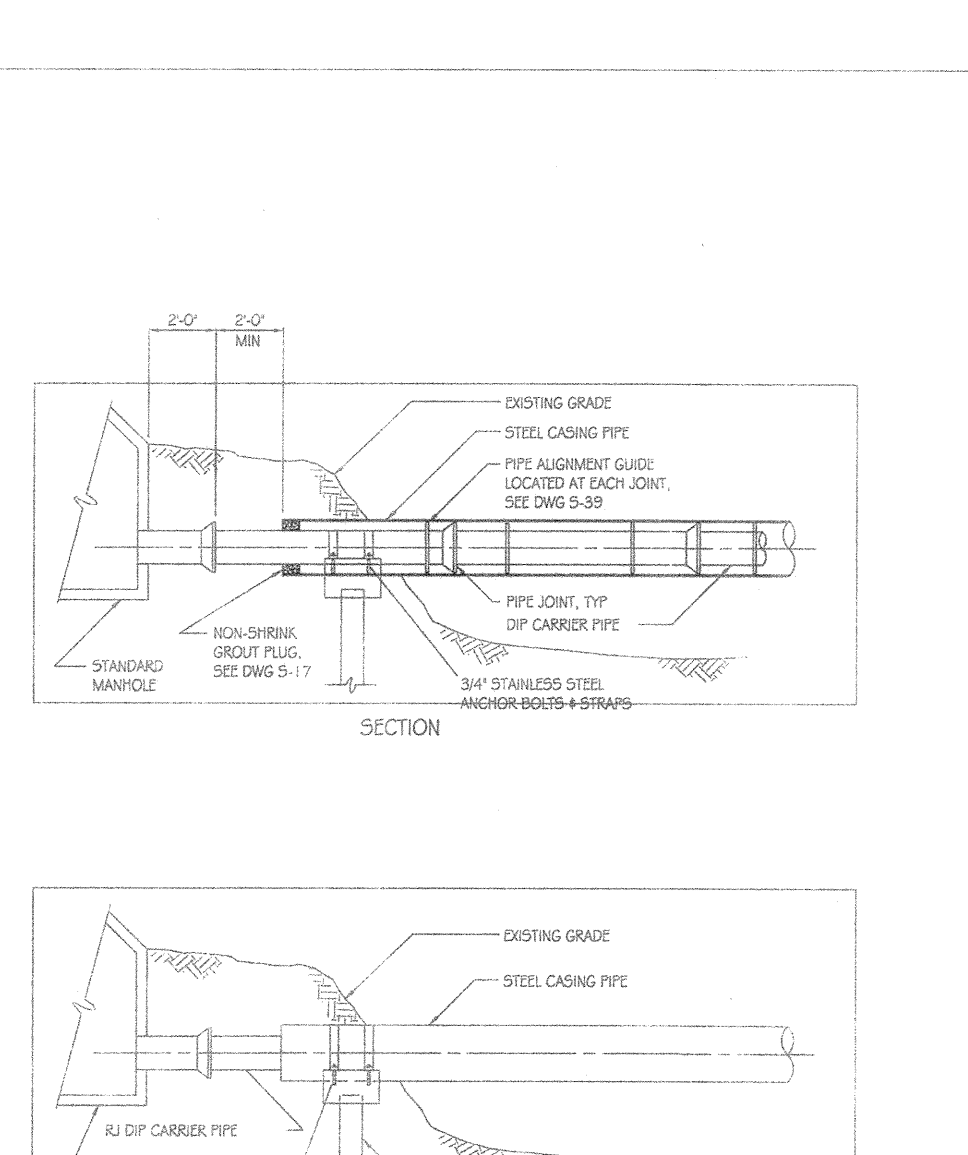
CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
STANDARD SLIP RESISTANT MANHOLE STEP DETAIL			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-28	RRH	3-30-00	



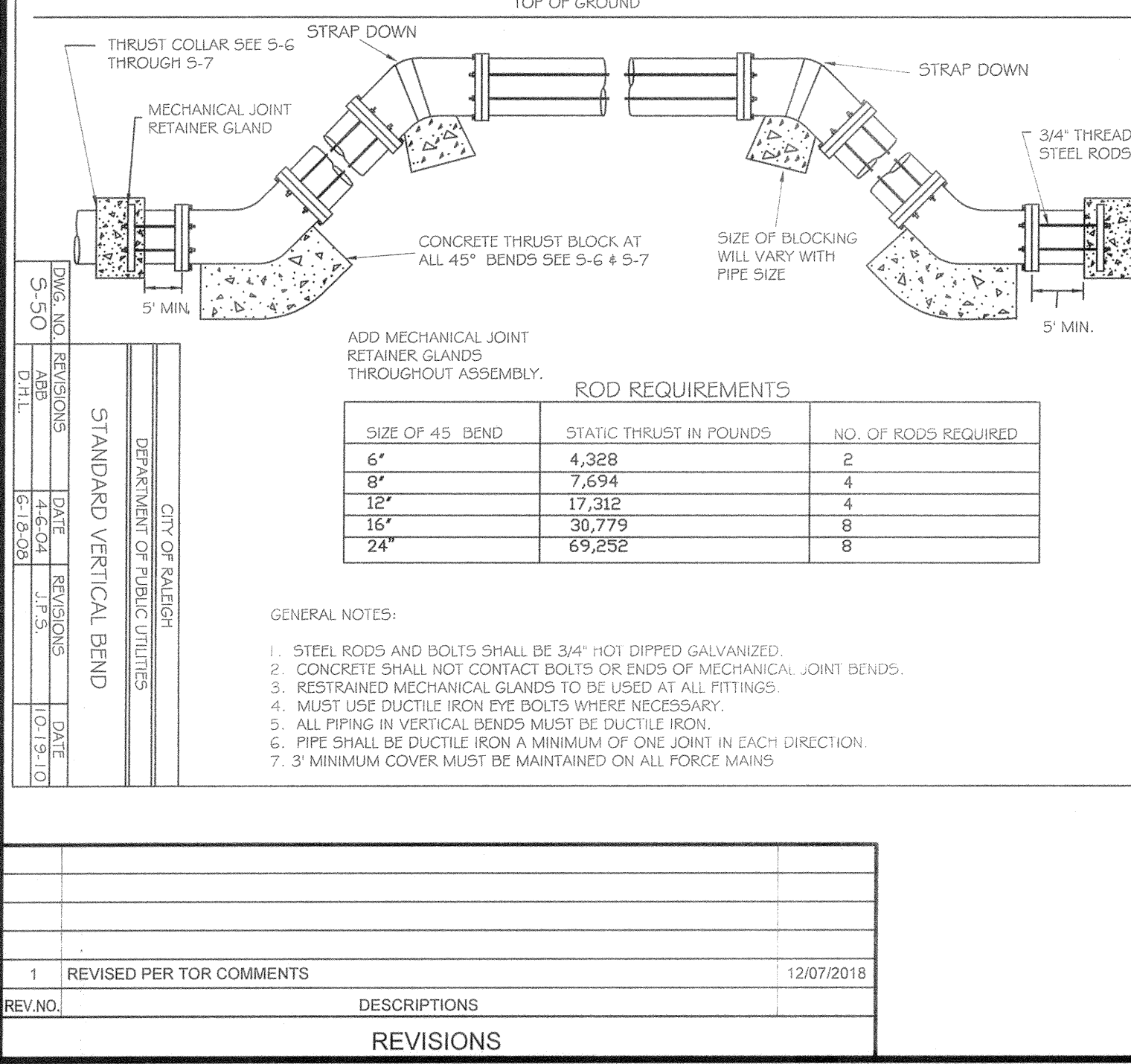
CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
STANDARD MANHOLE COVER			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-25	RRH	3-1-87	
	A.B.B.	2-9-05	
	D.H.L.	6-18-08	



CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
FLAT TOP MANHOLE COVER			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-25			



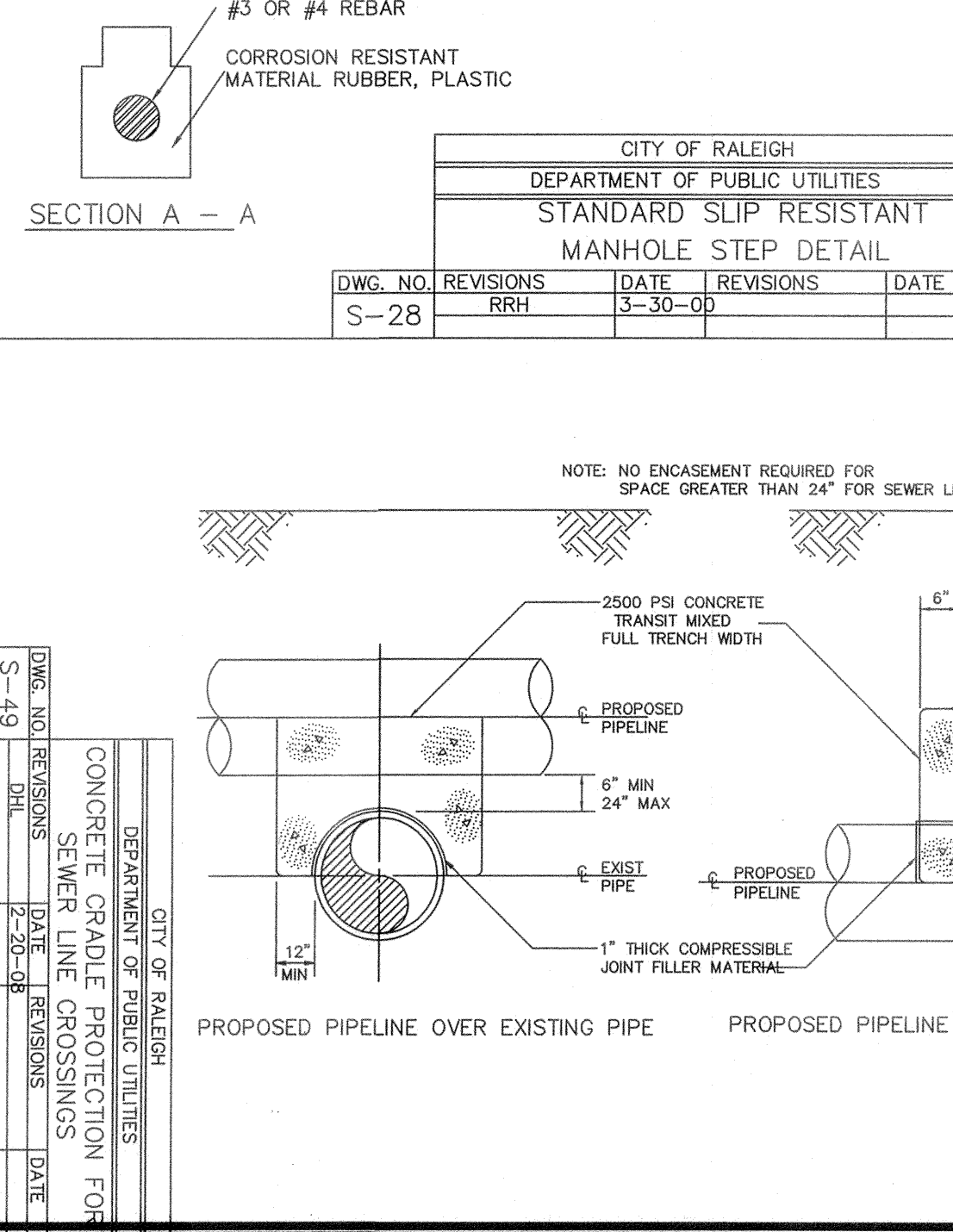
CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
AERIAL PIPE CROSSING			
TYPICAL PIPE SECTION & ELEVATION			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-13			



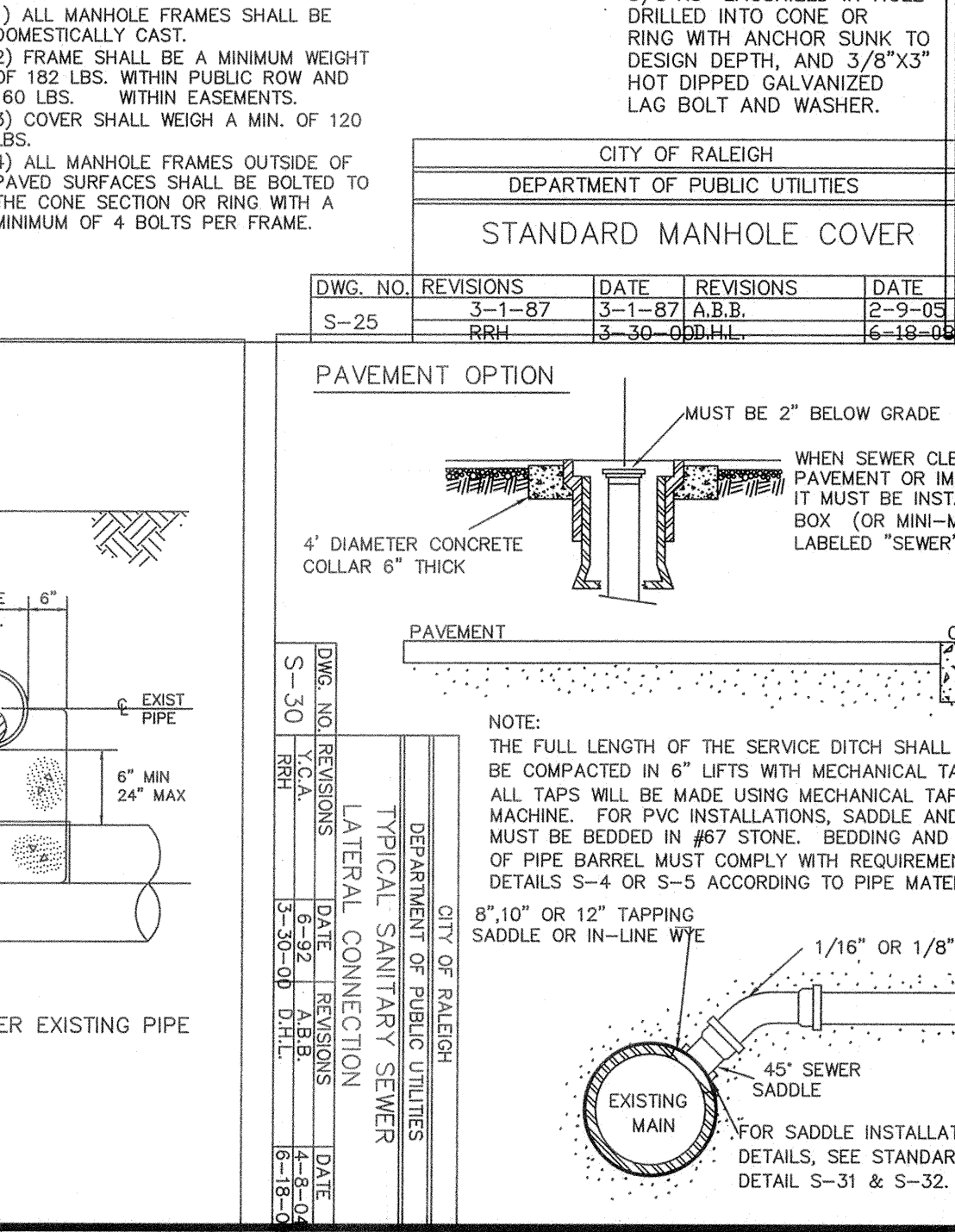
SIZE OF 45° BEND	STATIC THRUST IN POUNDS	NO. OF RODS REQUIRED
6"	4,328	2
8"	7,694	4
12"	17,312	4
16"	30,779	6
24"	69,252	8

- GENERAL NOTES:
- STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
  - CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BOLTS.
  - RESTRAINED MECHANICAL JOINTS TO BE USED AT ALL FITTINGS.
  - MUST USE DUCTILE IRON EYE BOLTS WHERE NECESSARY.
  - ALL PIPING IN VERTICAL BENDS MUST BE DUCTILE IRON.
  - PIPE SHALL BE DUCTILE IRON A MINIMUM OF ONE JOINT IN EACH DIRECTION.
  - MINIMUM COVER MUST BE MAINTAINED ON ALL FORCE MAINS.

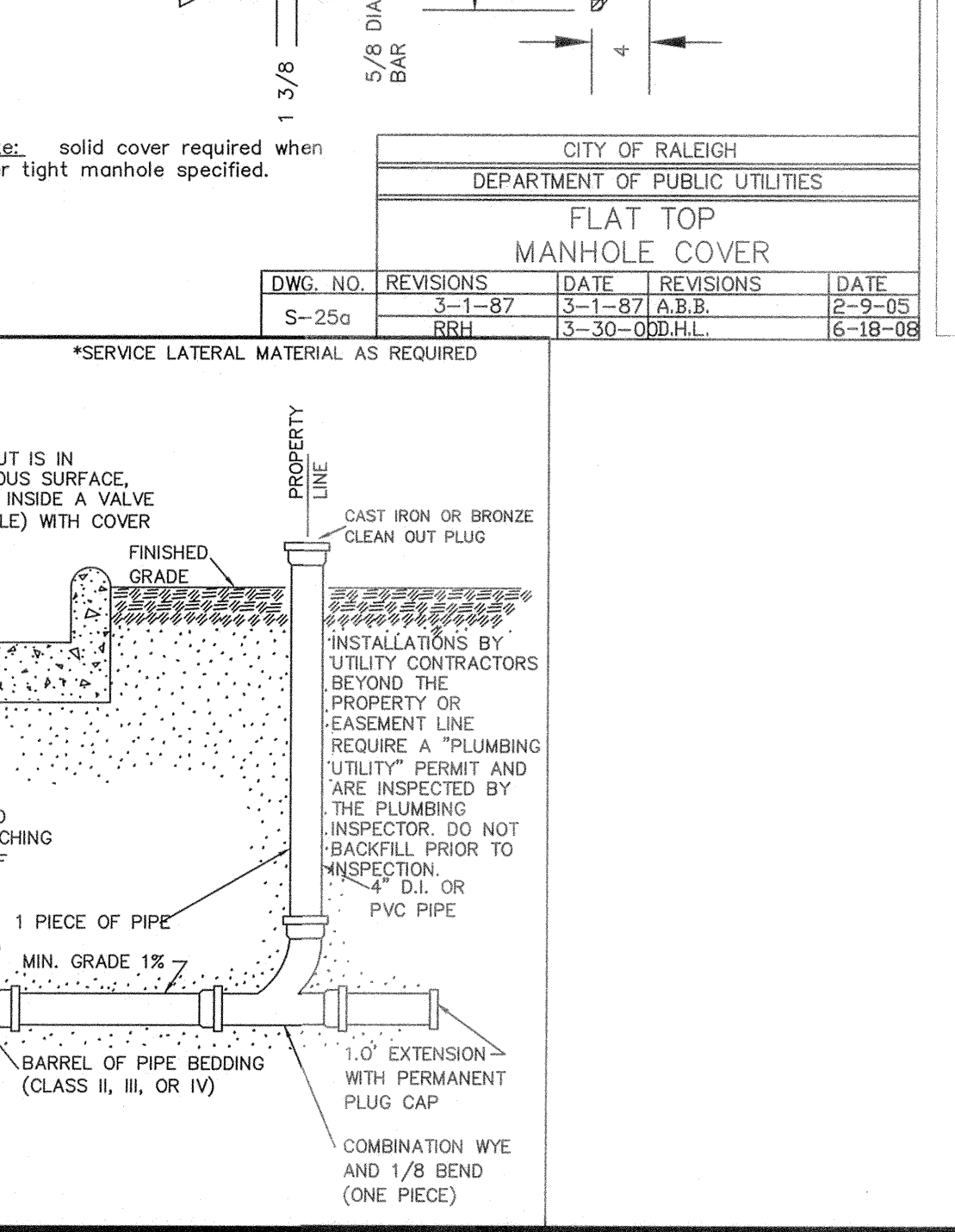
REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018



CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
CONCRETE GRADE PROTECTION FOR SEWER LINE CROSSINGS			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-49			



CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
PAVEMENT OPTION			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-30			



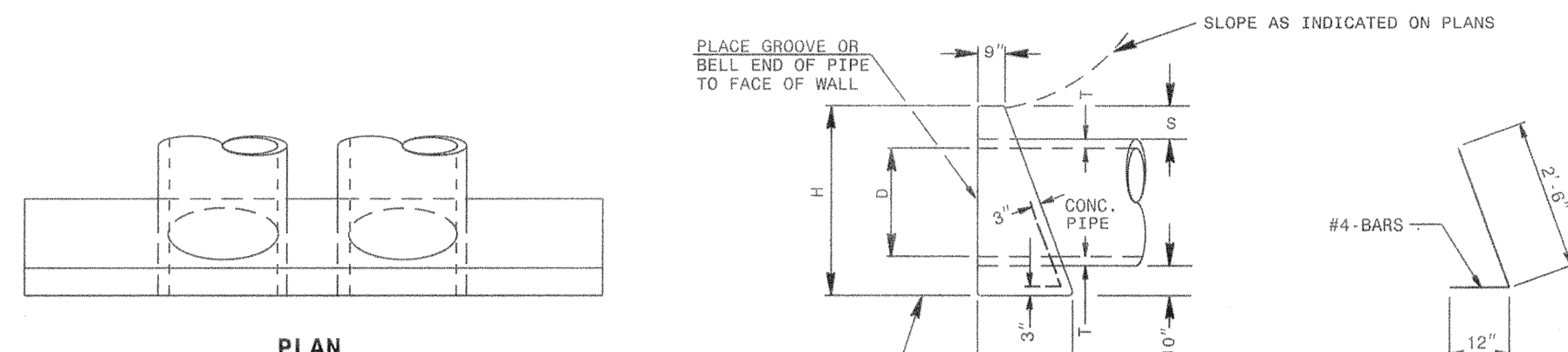
CITY OF RALEIGH			
DEPARTMENT OF PUBLIC UTILITIES			
SERVICE LATERAL MATERIAL AS REQUIRED			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-31			

**Bateman Civil Survey Company**  
 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378

**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS

**SEWER DETAILS**

Project Engineer: TSS  
 Designed By: RAJ  
 Drawn By: RAJ  
 Checked By: TSS  
 Scale: NTS  
 Date: 10/30/2018  
 Project Number: 170348  
 SHEET  
**C802**



LOC.	SINGLE PIPE				DOUBLE PIPE			
	15"	18"	24"	30"	15"	18"	24"	30"
QTY.	2	2	3	4	4	2	2	3
M	2	2	3	4	4	2	2	3
G	2	2	3	4	4	2	2	3
TOTAL LBS.	9	9	14	14	19	55	65	12

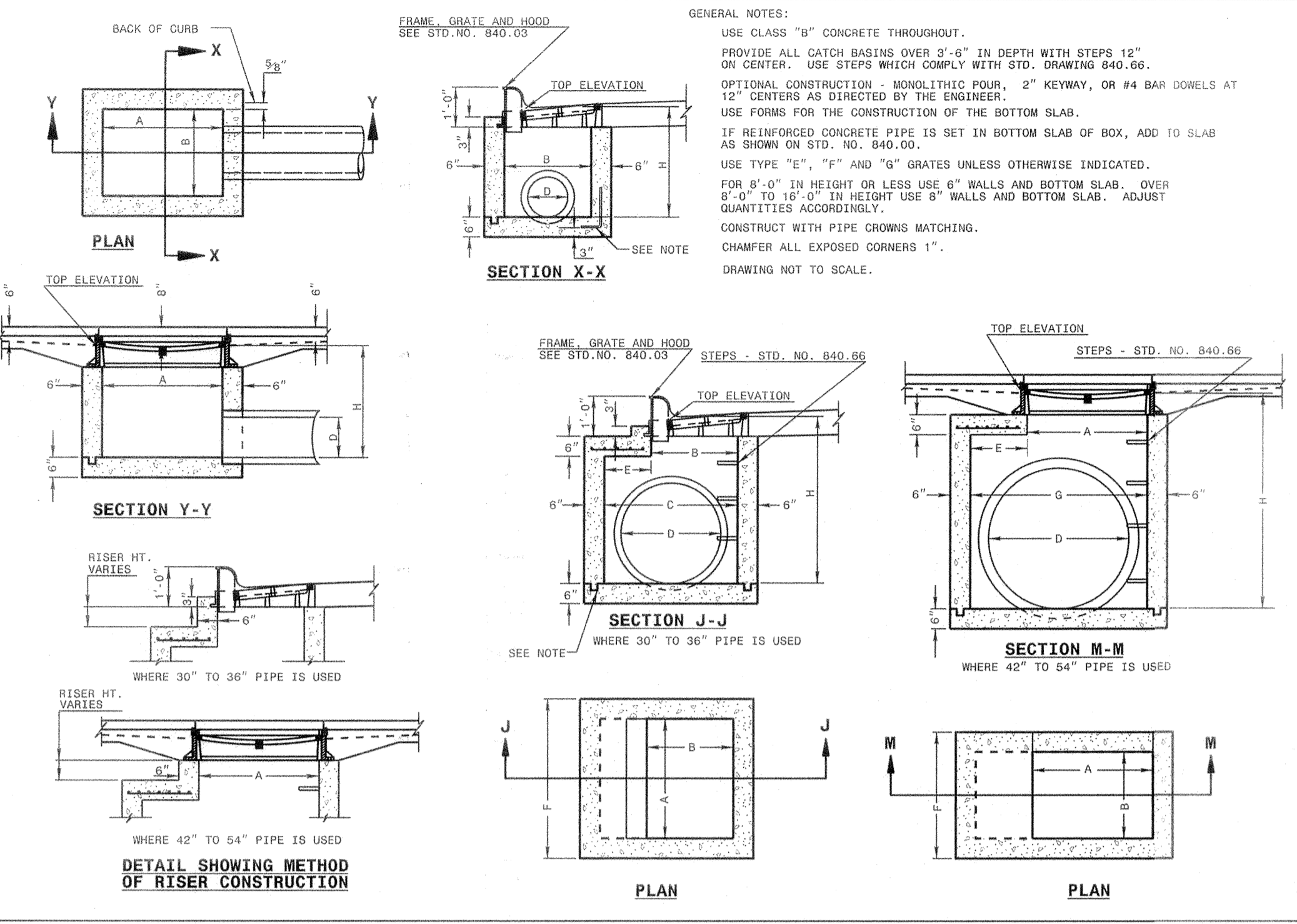
USING CONCRETE PIPE											
COMMON DIMENSIONS						SINGLE PIPE			DOUBLE PIPE		
D	H	B	G	T	S	L	YD <sup>3</sup>	M	L	YD <sup>3</sup>	M
15"	3'-3"	1'-8"	2'-9"	2 1/4"	0 1/2"	5'-6"	0.7	2'-2"	7'-8"	1.0	
18"	3'-7"	1'-10"	3'-2"	2 1/2"	10"	6'-4"	1.0	2'-7"	8'-11"	1.3	
24"	4'-2"	2'-1"	4'-0"	3"	10"	8'-0"	1.5	3'-5"	11'-5"	2.0	
30"	5'-0"	2'-6"	4'-7"	4 1/4"	11 1/2"	9'-2"	2.3	4'-3"	13'-5"	3.1	
36"	5'-8"	2'-8"	5'-0"	4 3/4"	11 1/2"	11'-0"	3.4	5'-0"	16'-0"	4.5	
42"	6'-2"	3'-1"	6'-4"	5 1/4"	11 1/2"	12'-8"	4.5	5'-10"	18'-6"	6.0	
48"	6'-9"	3'-5"	7'-2"	6 3/4"	11 1/2"	14'-4"	6.0	6'-8"	21'-0"	8.0	

\*SEE SHEET 3

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE ENDWALL FOR SINGLE AND DOUBLE PIPE CULVERTS 15" THRU 48" PIPE - 90° SKEW

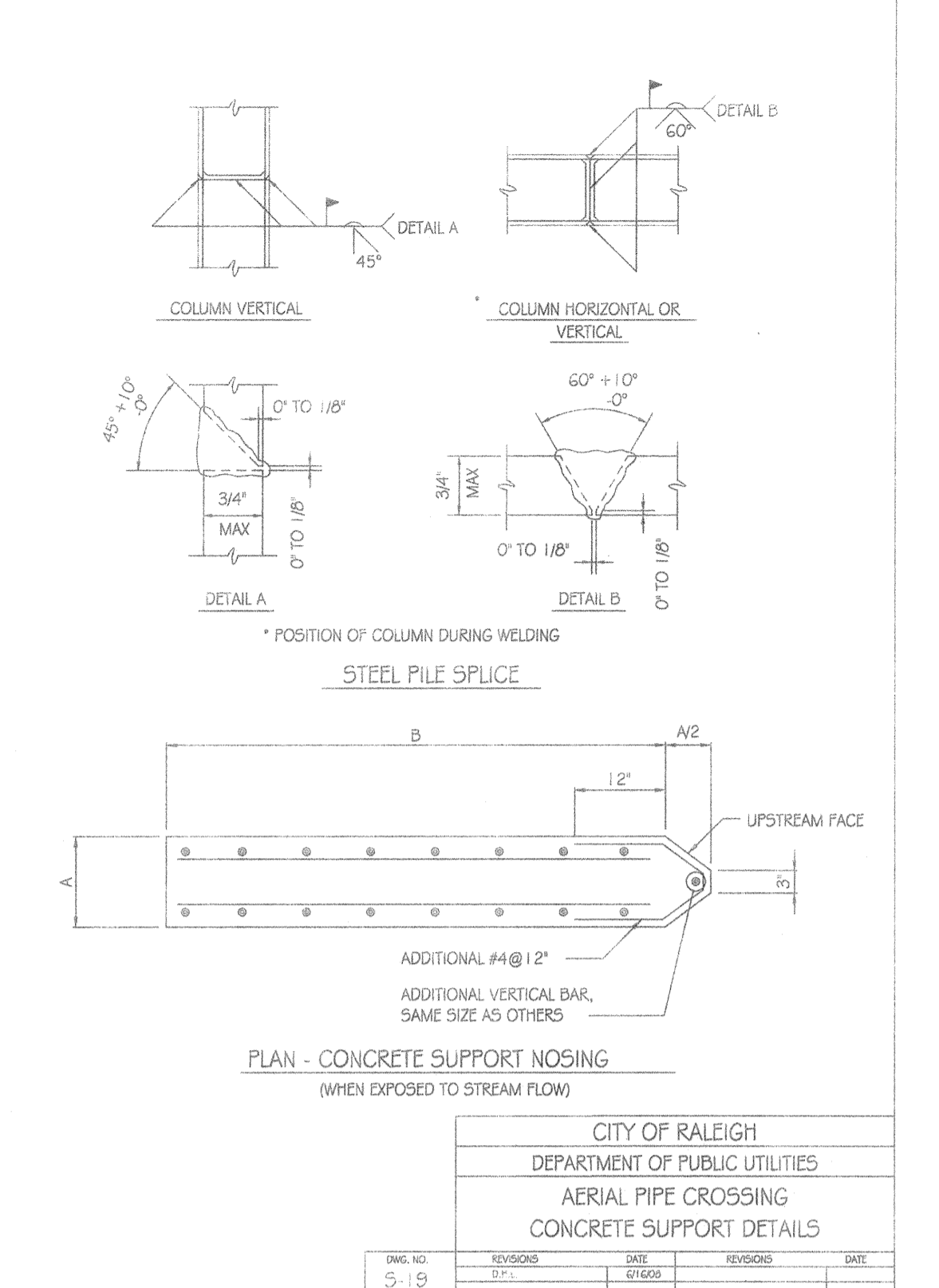
SHEET 1 OF 3  
838.01



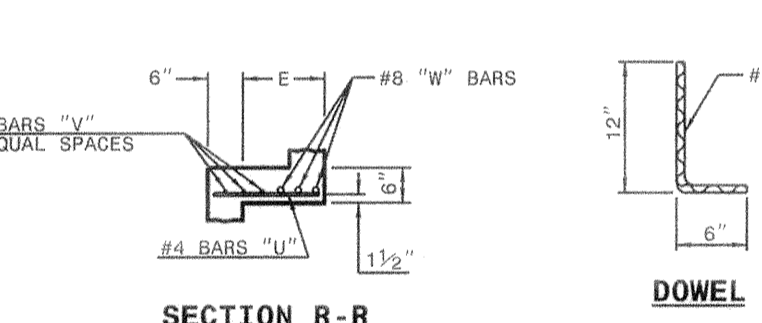
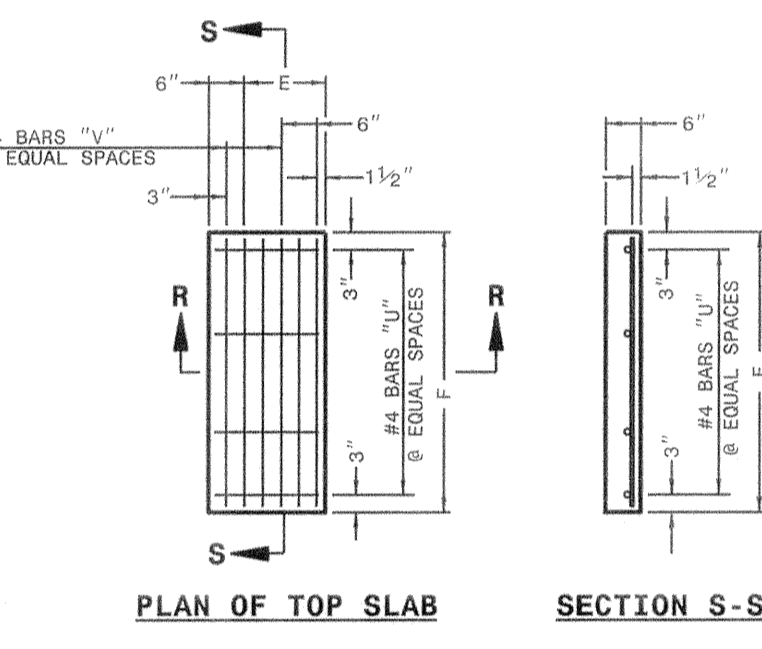
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

SHEET 1 OF 2  
840.02



CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES AERIAL PIPE CROSSING CONCRETE SUPPORT DETAILS			
DWG. NO.	REVISIONS	DATE	REVISIONS
15-19	1	1/17	



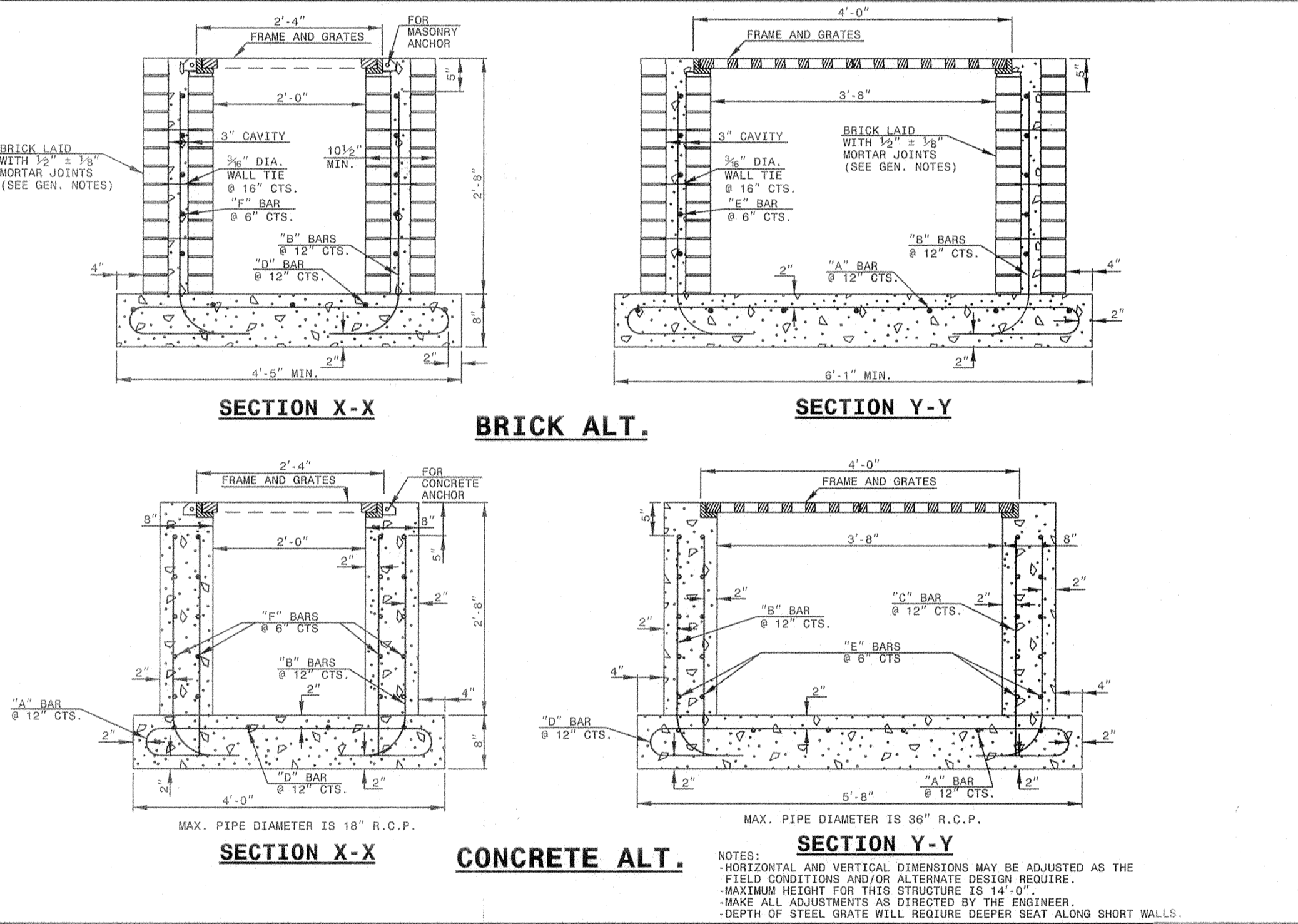
PIPE DIA.	DIMENSIONS OF BOX AND PIPE				COVER DIMENSION			CL. YDS. CONC. IN BOX			DEDUCTIONS							
	SPAN	WIDTH	DEPTH	MIN. HEIGHT	E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	TOP SLAB	BOTTOM	ONE PIPE			
12"	3'-0"	2'-2"	2'-0"	2'-8"	1'-0"	1'-0"	0	0	0	0	0	0	0.235	0.772	0.015	0.028		
15"	3'-0"	2'-2"	2'-0"	3'-0"	1'-0"	1'-0"	0	0	0	0	0	0	0.235	0.829	0.023	0.036		
18"	3'-0"	2'-2"	2'-0"	3'-3"	1'-0"	1'-0"	0	0	0	0	0	0	0.235	0.887	0.033	0.049		
24"	3'-0"	2'-2"	2'-0"	3'-9"	1'-0"	1'-0"	0	0	0	0	0	0	0.235	1.001	0.059	0.085		
30"	3'-0"	2'-2"	2'-0"	4'-3"	1'-2"	4'-0"	4	1'-5"	2	3'-9"	3	3'-9"	0.123	0.321	1.433	0.092	0.127	
36"	3'-0"	2'-2"	2'-0"	4'-9"	1'-6"	4'-0"	4	1'-11"	3	3'-9"	3	3'-9"	0.163	0.398	1.714	0.132	0.178	
42"	3'-0"	2'-2"	2'-0"	4'-5"	0-3"	1'-6"	3'-2"	4	1'-8"	2	2'-11"	3	2'-11"	0.112	0.316	1.728	0.180	0.243
48"	3'-0"	2'-2"	2'-0"	5'-0"	0-5"	2'-0"	3'-2"	4	2'-3"	3	2'-11"	3	2'-11"	0.145	0.352	2.052	0.235	0.317
54"	3'-0"	2'-2"	2'-0"	5'-7"	0-5"	2'-7"	3'-2"	4	2'-10"	5	2'-11"	3	2'-11"	0.180	0.386	2.387	0.297	0.401

\* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

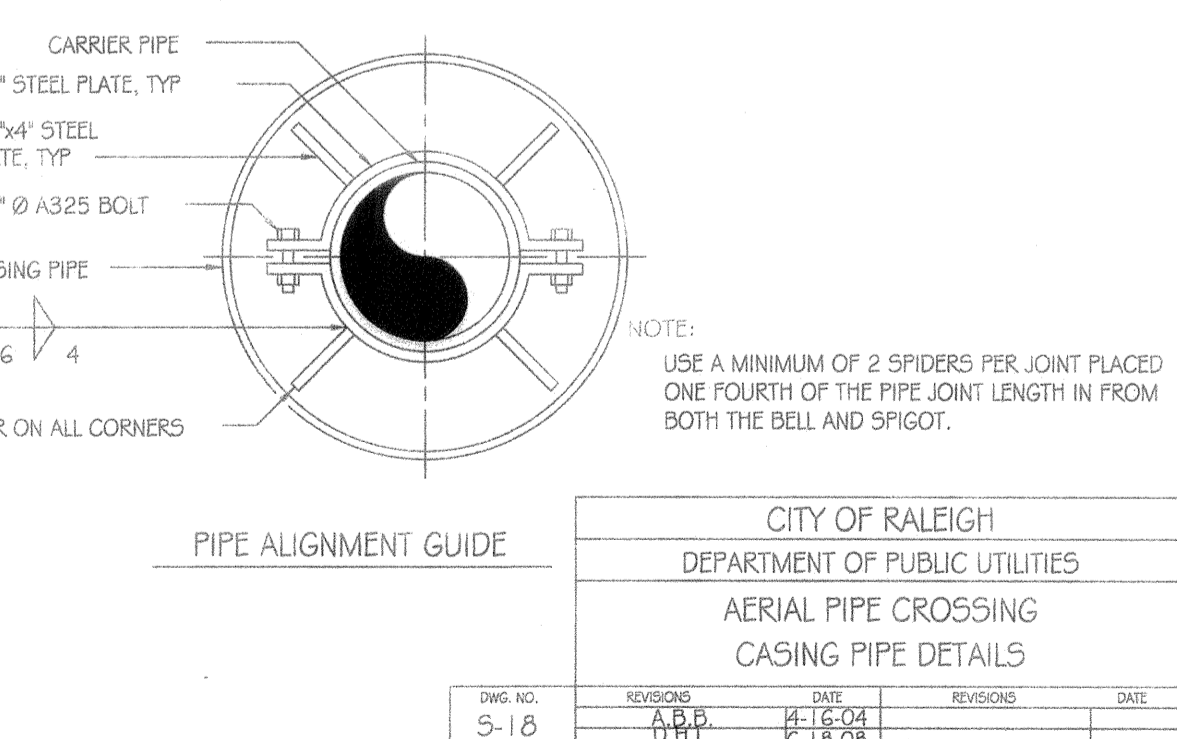
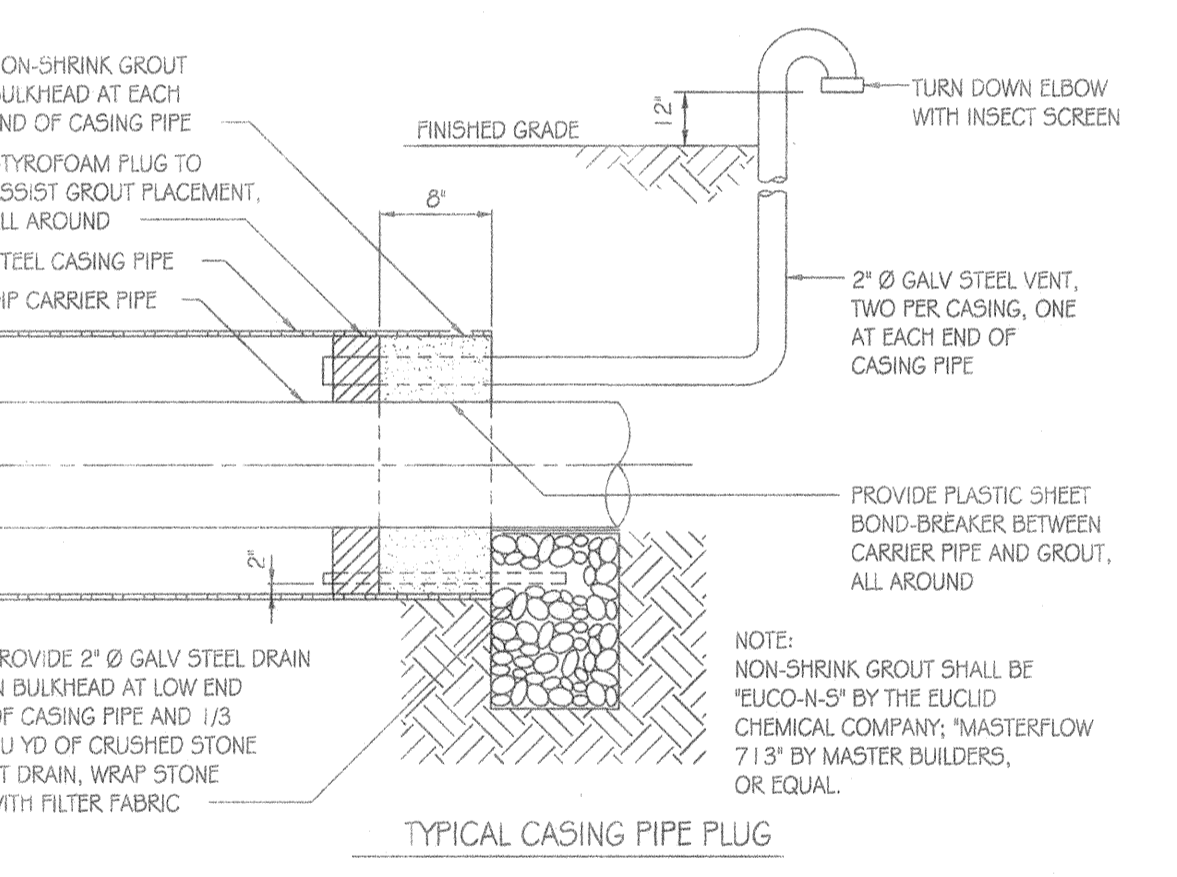
SHEET 2 OF 2  
840.02



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

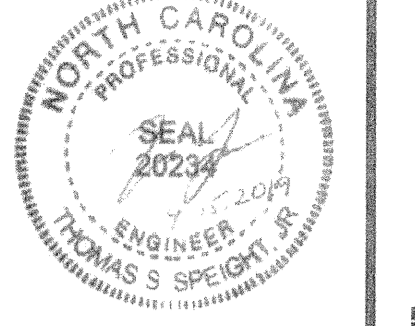
ROADWAY STANDARD DRAWING FOR TRAFFIC BEARING GRATED DROP INLET FOR CAST IRON DOUBLE FRAME AND GRATES

SHEET 1 OF 2  
840.35

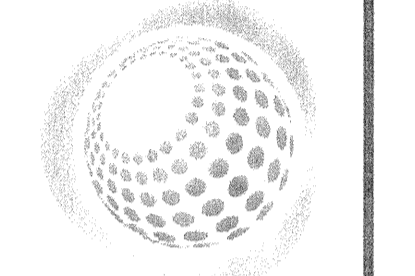


CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES AERIAL PIPE CROSSING CASING PIPE DETAILS			
DWG. NO.	REVISIONS	DATE	REVISIONS
S-18	A.B.P.	4-16-04	
	D.T.L.	8-12-09	

City of Raleigh  
Public Utilities Department  
DATE 4/23/14  
BY [Signature]



**Bateman Civil Survey Company**  
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2524 Reliance Avenue, Apex, North Carolina 27539  
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NCBLS FIRM NO. C-2378



**ELIZABETH HEIGHTS**  
CONSTRUCTION DRAWINGS  
1205 AVERETTE ROAD  
WAKE FOREST, NC 27587  
WAKE COUNTY, NC

**SEWER CONT. / STORM DETAILS**

Project Engineer:	TSS
Designed By:	RAJ
Drawn By:	RAJ
Checked By:	TSS
Scale:	NTS
Date:	10/30/2016
Project Number:	170348

SHEET  
**C803**

REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2016
	REVISIONS	

~~PRELIMINARY~~  
~~NOT RELEASED FOR CONSTRUCTION~~  
12/07/2016

**GENERAL NOTES:**  
 USE CLASS "B" CONCRETE THROUGHOUT.  
 PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.06.  
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.  
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.  
 IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.  
 CONSTRUCT WITH PIPE CROWNS MATCHING.  
 SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.  
 INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.  
 INSTALL STONE DRAINS OF A MINIMUM OF 1 CUBIC FOOT OF NO. 7MM STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.  
 CHAMFER ALL EXPOSED CORNERS 1".  
 DRAWING NOT TO SCALE.

DIMENSIONS AND QUANTITIES FOR DROP INLET (BASED ON MIN. HEIGHT, H)									
DIMENSIONS OF BOX & PIPE				CUBIC YARDS		DEDUCTIONS FOR ONE PIPE			
PIPE	SPAN	WIDTH	MIN. HEIGHT	BOTTOM SLAB	WALL PER FT. HT	CONC. IN BOX	NOTE: 1. DETECTABLE W/ W/THIN SURF. 2. DETECTABLE W/ 0.02 (MIN.) 3. DETECTABLE W/ 0.02 (MAX.)	C.M.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.222	0.222	0.582	0.015	0.026	
15"	3'-0"	2'-3"	2'-3"	0.648	0.023	0.028			
18"	3'-0"	2'-6"	2'-6"	0.793	0.033	0.049			
24"	3'-0"	3'-0"	3'-0"	0.814	0.059	0.085			
30"	3'-0"	3'-6"	3'-6"	0.222	0.925	0.092	0.127		

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CONCRETE DROP INLET 12" THRU 30" PIPE

SHEET 1 OF 1  
**840.14**

OUTLET W/DITCH				OUTLET W/O DITCH			
D	CLASS 'B' RIP RAP	CLASS I RIP RAP	S. Y.	CLASS 'B' RIP RAP	CLASS I RIP RAP	S. Y.	CLASS I RIP RAP
12"	2	5	5	2	5	1	4
15"	2	7	7	3	7	1	5
18"	3	10	9	4	10	2	7
24"	5	14	15	7	15	3	11
30"	8	21	21	11	23	5	16
36"	11	28	29	15	30	7	22
42"	15	37	39	20	39	10	28
48"	-	-	49	26	50	-	28
54"	-	-	60	33	62	-	36
60"	-	-	73	40	75	-	44
66"	-	-	87	48	89	-	54
72"	-	-	102	57	104	-	64

NOTE: FOR CALCULATION PURPOSES  
 CLASS 'B' RIP RAP = 100 LBS./FT<sup>3</sup>  
 CLASS I RIP RAP = 105 LBS./FT<sup>3</sup>

H= RIP RAP TO TOP OF PIPE (MAX. H = D + T)  
 T= 15" CLASS I RIP RAP, UNLESS OTHERWISE SHOWN ON PLANS  
 T= 12" CLASS 'B' RIP RAP, UNLESS OTHERWISE SHOWN ON PLANS

SHEET 1 OF 1  
**876.02**

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR GUIDE FOR RIP RAP AT PIPE OUTLETS

SHEET 1 OF 1  
**876.02**

FULL DEPTH CUT SHALL BE MADE PERPENDICULAR TO THE BACK OF CURB

PORTION TO BE REMOVED

GUTTER LINE

IF THE FINAL LIFT OF ASPHALT HAS BEEN INSTALLED AND IS DAMAGED DURING CURB REMOVAL, A ONE FOOT WIDE SECTION OF ASPHALT SHOULD BE SAWCUT AND REMOVED FOR FORMS TO BE USED TO KEEP A STRAIGHT EDGE ON THE DRIVEWAY APRON. REINSTALL HOT MIX SURFACE ASPHALT PATCH S9.5B.

IF THE FINAL LIFT OF ASPHALT HAS NOT BEEN INSTALLED, THE ASPHALT IN FRONT OF THE APRON CAN REMAIN IN PLACE.

NOTES:  
 1. CURB AND GUTTER SECTION SHALL BE REMOVED IN ACCORDANCE WITH DRIVEWAY WIDTH APPROVED BY THE CITY.  
 2. IF PERPENDICULAR CUT IS LESS THAN 5' FROM NEXT JOINT, THEN THE PARALLEL CUT SHALL BE MADE TO THAT JOINT.  
 3. THIS METHOD IS NOT ALLOWED IN NEW ROADWAY CONSTRUCTION.

CITY OF RALEIGH STANDARD DETAIL

REVISIONS	DATE #118	NOT TO SCALE

STANDARD METHOD OF REMOVING EXISTING CURB (FOR A DRIVEWAY APRON INSTALLATION)

**T-10.24**

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR CURB RAMP PROPOSED CURB AND GUTTER

SHEET 1 OF 3  
**848.05**

ISOMETRIC VIEW

SECTION B-B

SECTION A-A

PLAN VIEW

NOTES:  
 1. DETECTABLE WARNING DOMES WILL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.  
 2. DETECTABLE WARNING DOMES WILL CONTRAST VISIBILITY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.

W	A	B+A+D	X	G
0'	0'	5.8'	5.8'	3.0'
0'	0'	6.8'	6.8'	6.0'
0'	0'	7.8'	7.3'	6.5'
0'	0'	8.8'	7.3'	6.5'
0'	0'	7.8'	7.8'	5.0'
0'	2.5'	8.3'	8.1'	4.8'
0'	3.0'	8.8'	8.3'	4.4'
0'	3.5'	9.3'	8.4'	4.1'
0'	4.0'	9.8'	8.6'	3.8'
0'	4.5'	10.3'	8.7'	3.4'
0'	5.0'	10.8'	8.9'	3.1'

B = X (A+10')

8' DISTANCE FROM FRONT EDGE OF SIDEWALK TO BACK POINT OF 12:1 (8.33%) SLOPE.

BACK OF SIDEWALK DROP REQUIRED FOR ALL SIDEWALK SLOPES.

\*\* BACK OF SIDEWALK DROP REQUIRED FOR SIDEWALK SLOPES 0.04.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PROPOSED CURB AND GUTTER

CITY OF RALEIGH STANDARD DETAIL

CONCRETE SIDEWALK

SHEET 1 OF 3  
**T-30.01**

TYPICAL SECTION

TRANSVERSE EXPANSION JOINT

PLAN VIEW

NOTES:  
 1. TRANSVERSE EXPANSION JOINTS TO BE A MAXIMUM OF 50 FEET.  
 2. ALL CONCRETE TO BE 3000 PSI AND FINISHED WITH CURING COMPOUND.  
 3. A 6 INCH DEPTH IS REQUIRED AT LOCATIONS OF DRIVEWAY CROSSINGS, AT STREET INTERSECTIONS (ALONG THE LENGTH OF RADIUS CURB RETURNS), AND IN THE HANDICAP RAMPS.

PERMATRK PEDESTRIAN BRIDGE

12/07/2018

REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

PERMATRK PEDESTRIAN BRIDGE

PERMATRK PEDESTRIAN BRIDGE

PRELIMINARY NOT RELEASED FOR CONSTRUCTION

12/07/2018

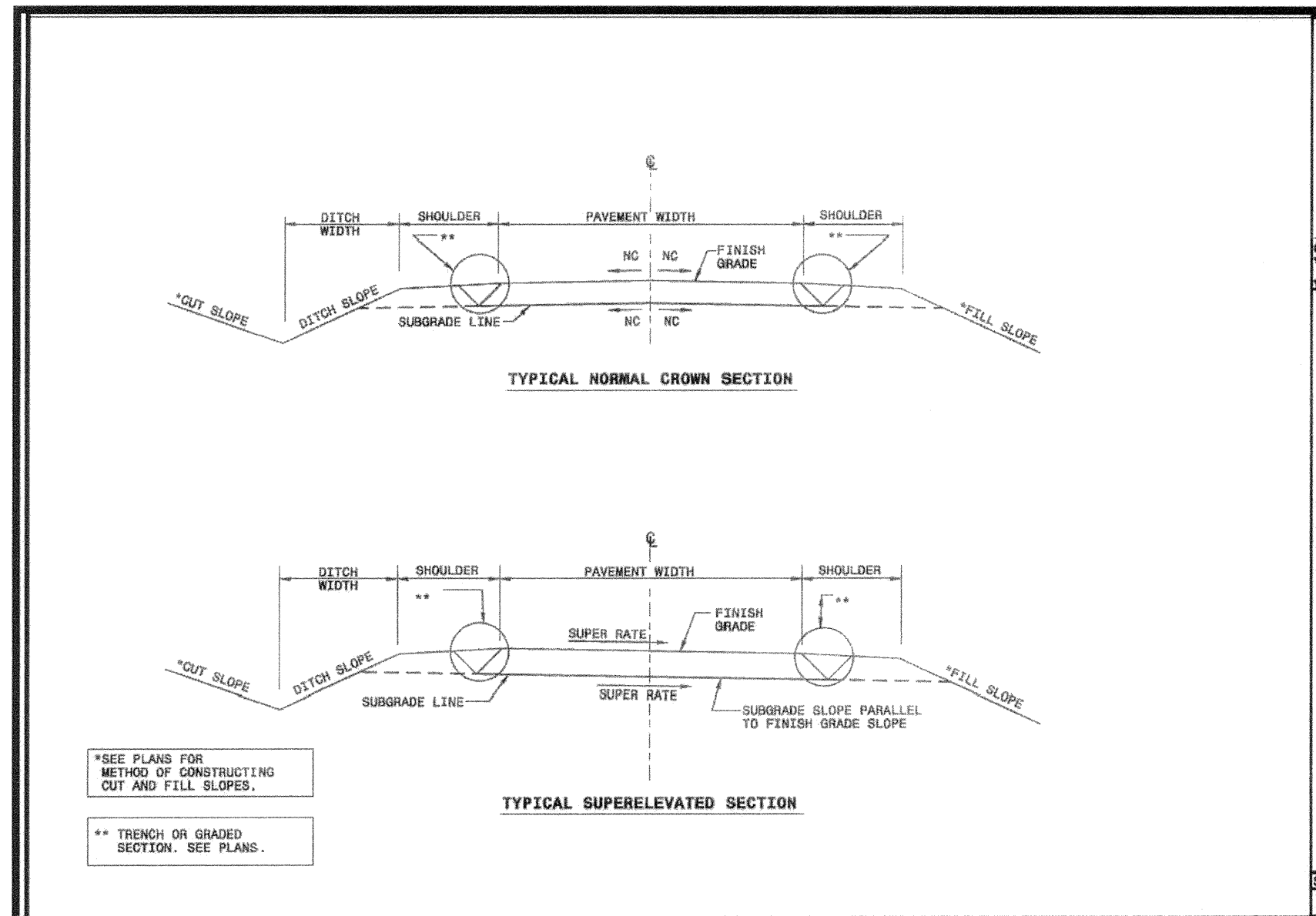
ELIZABETH HEIGHTS CONSTRUCTION DRAWINGS

SITE DETAILS

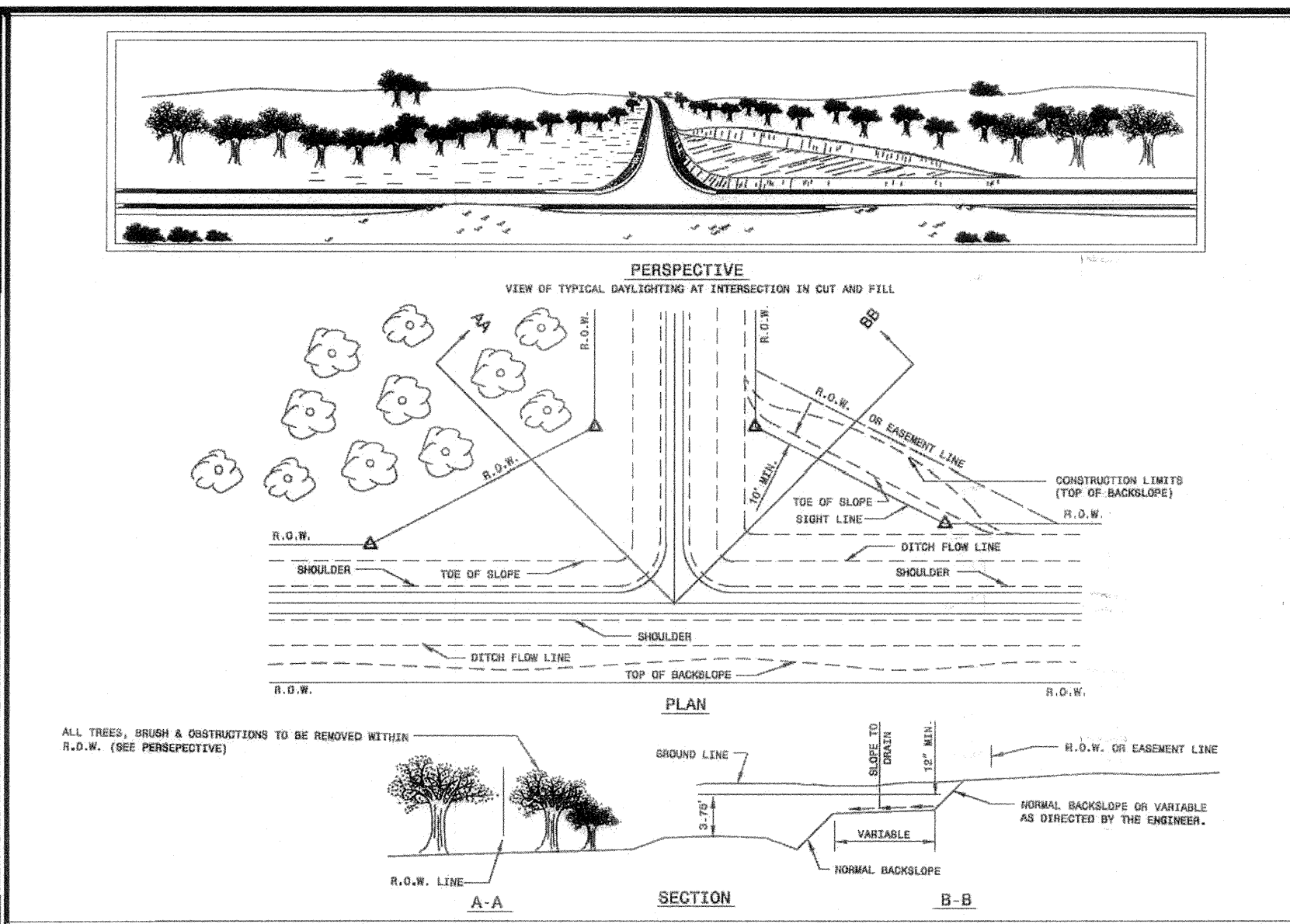
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 Engineers • Surveyors • Planners  
 2524 Reliance Avenue, Apex, North Carolina 27539  
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 NCBELS FIRM No. C-2378

1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

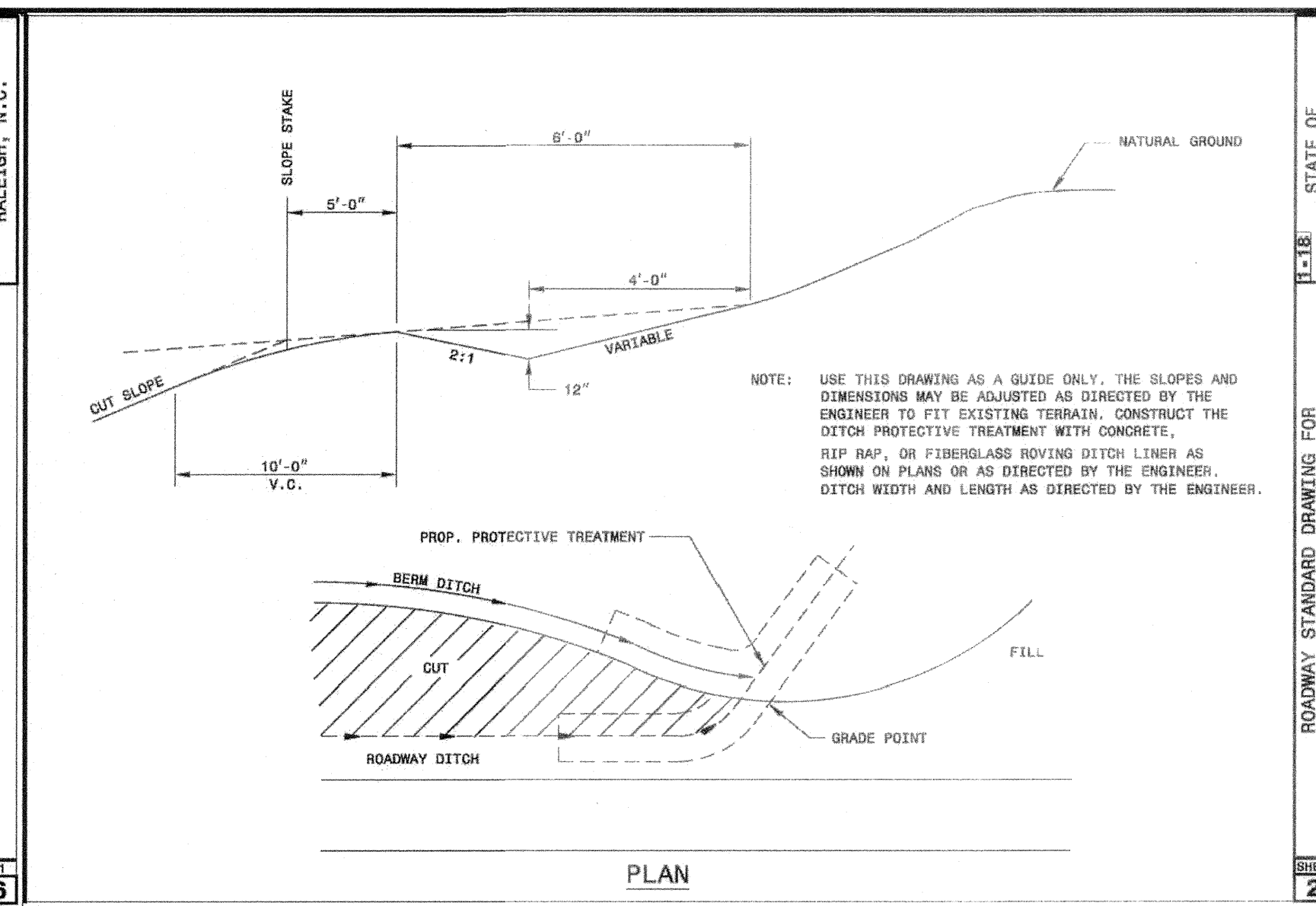
Project Engineer: TSS  
 Designed By: RAJ  
 Drawn By: RAJ  
 Checked By: TSS  
 Scale: NTS  
 Date: 10/30/2018  
 Project Number: 170348  
 SHEET **C804**



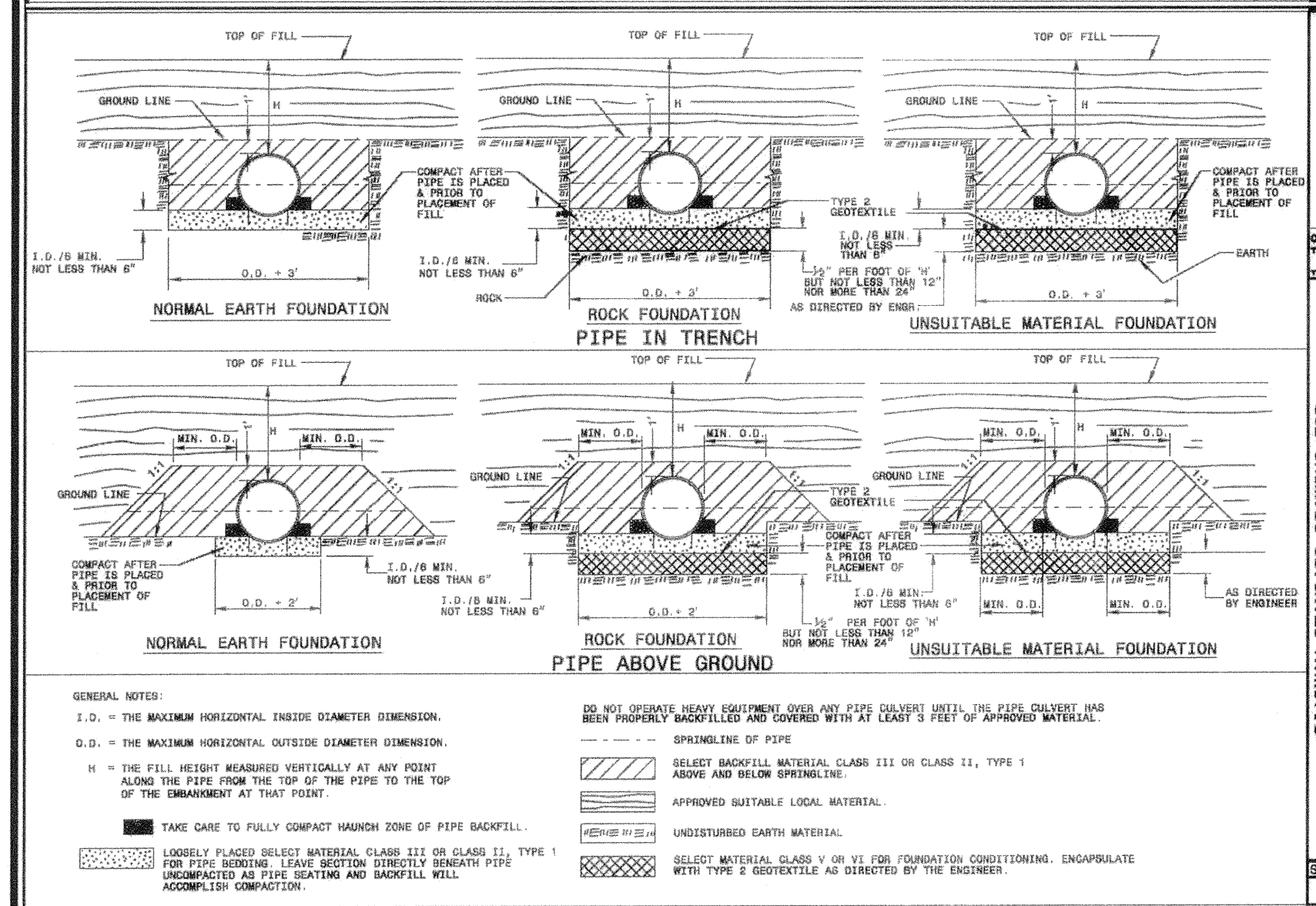
ROADWAY STANDARD DRAWING FOR  
**GUIDE FOR GRADING SUBGRADE**  
 SECONDARY AND LOCAL  
 SHEET 1 OF 1  
**225.02**



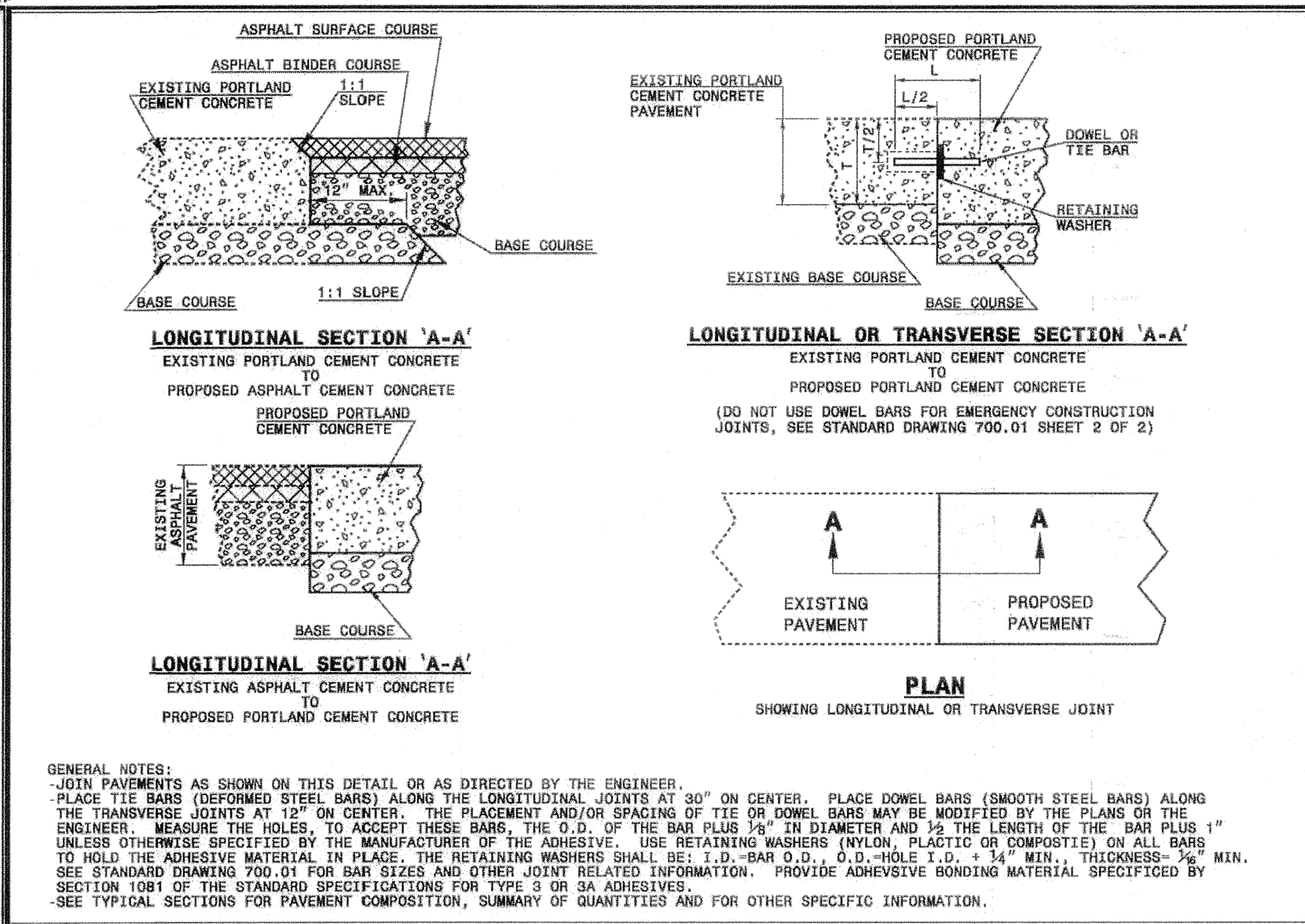
ROADWAY STANDARD DRAWING FOR  
**METHOD OF GRADING SIGHT**  
 DISTANCE AT INTERSECTIONS  
 SHEET 1 OF 1  
**225.06**



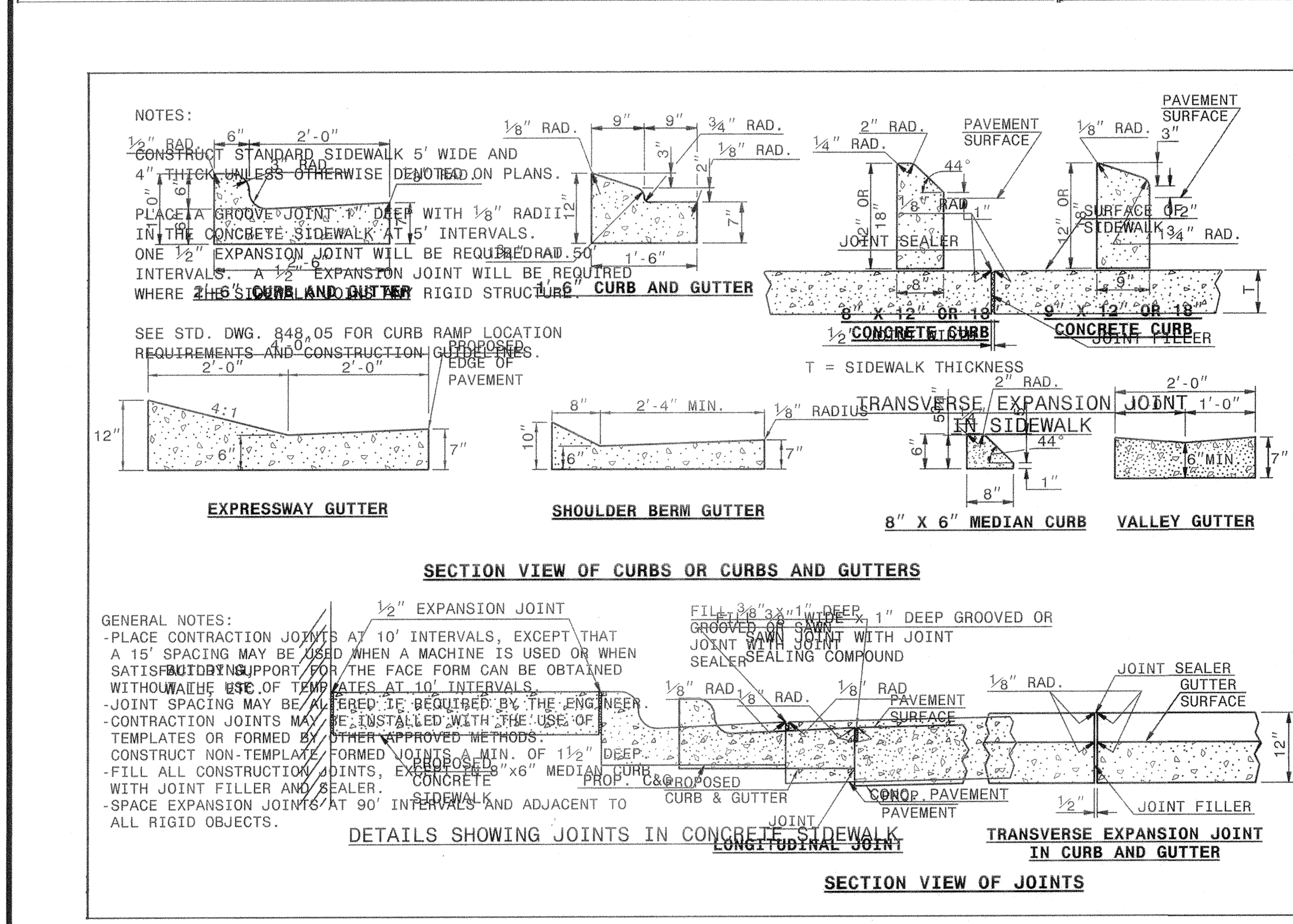
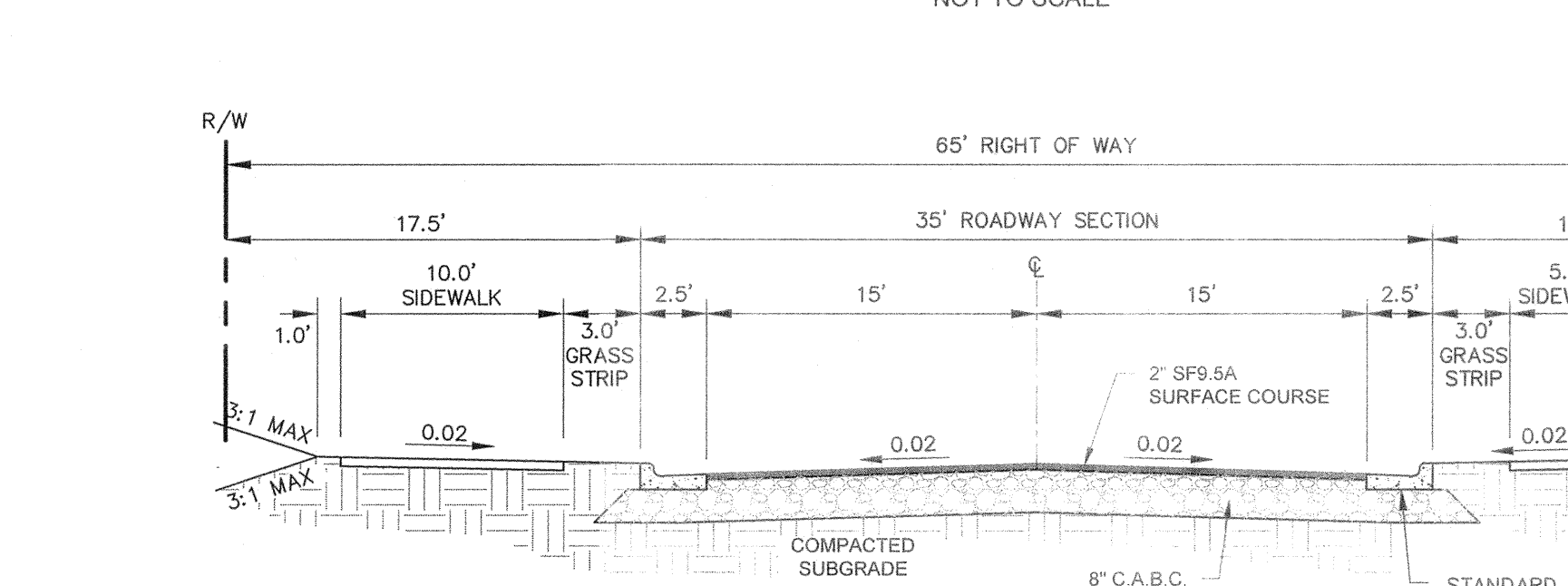
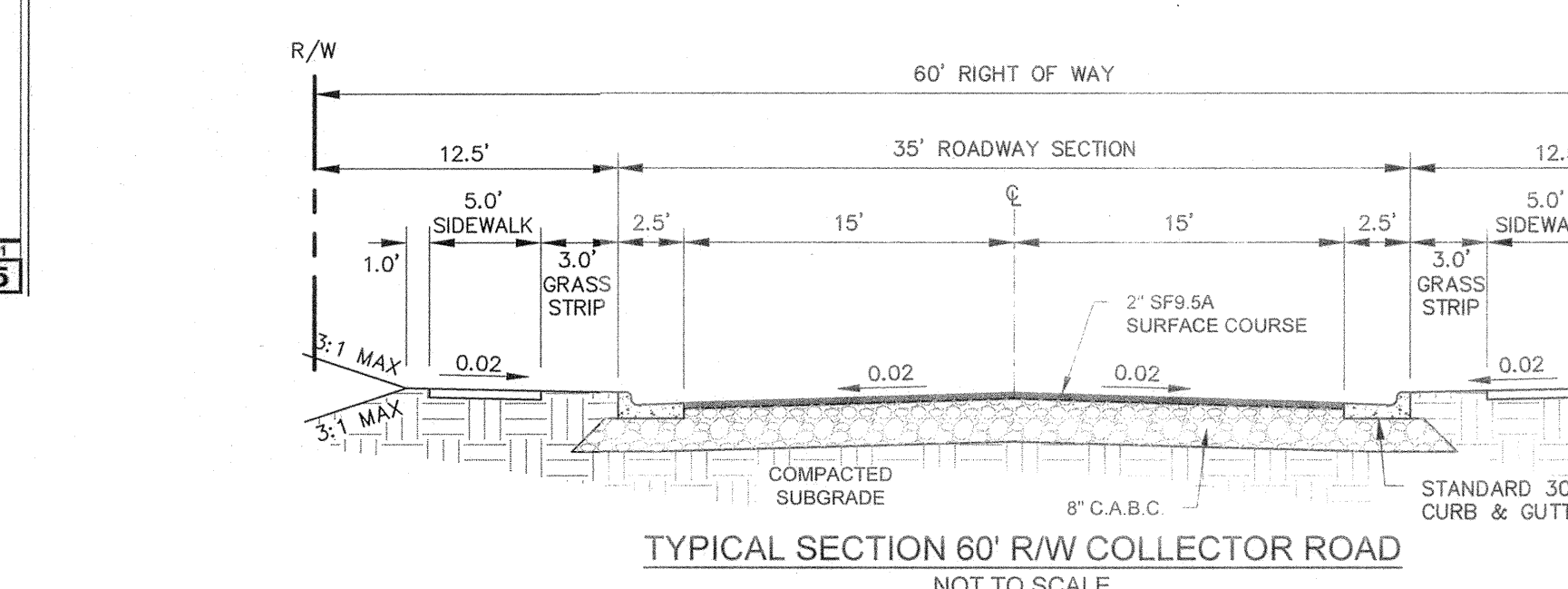
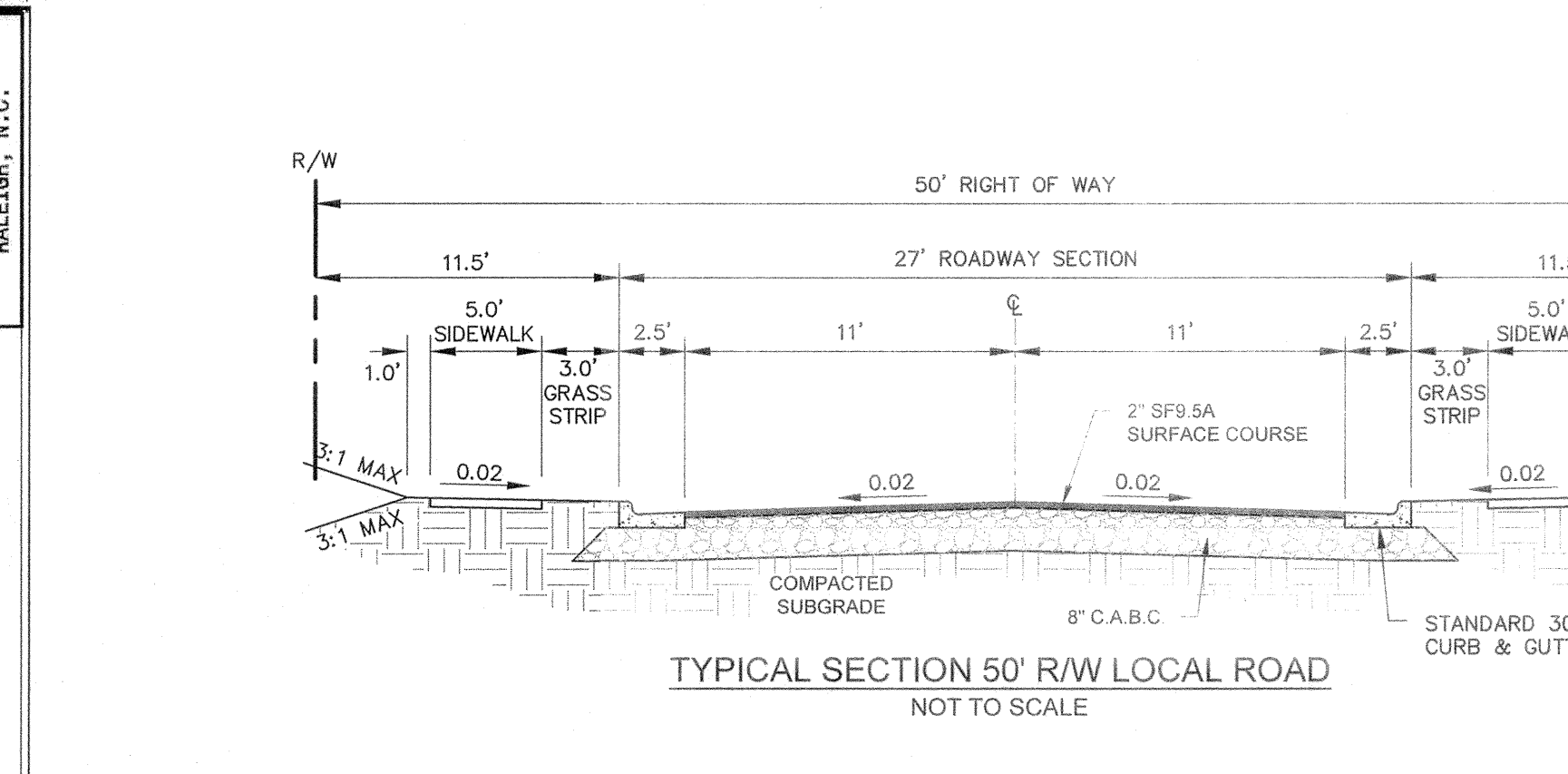
ROADWAY STANDARD DRAWING FOR  
**GUIDE FOR BERM DITCH CONSTRUCTION**  
 SHEET 1 OF 1  
**240.01**



ROADWAY STANDARD DRAWING FOR  
**METHOD OF PIPE INSTALLATION**  
 FLEXIBLE PIPE  
 SHEET 1 OF 3  
**300.01**



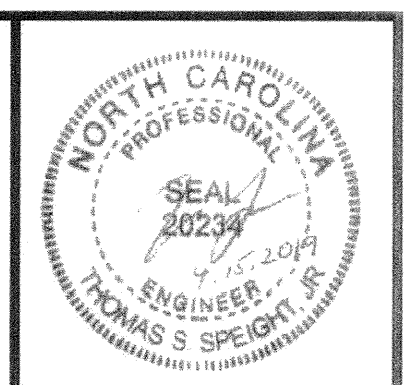
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 TO EXISTING PAVEMENT  
 SHEET 1 OF 1  
**700.05**



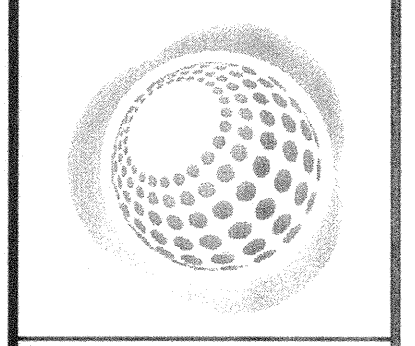
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 SHEET 1 OF 3  
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REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

**PRELIMINARY**  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~  
 12/07/2018



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 Phone: 919.577.1080 Fax: 919.577.1081  
 NCBELS FIRM No. C-2378

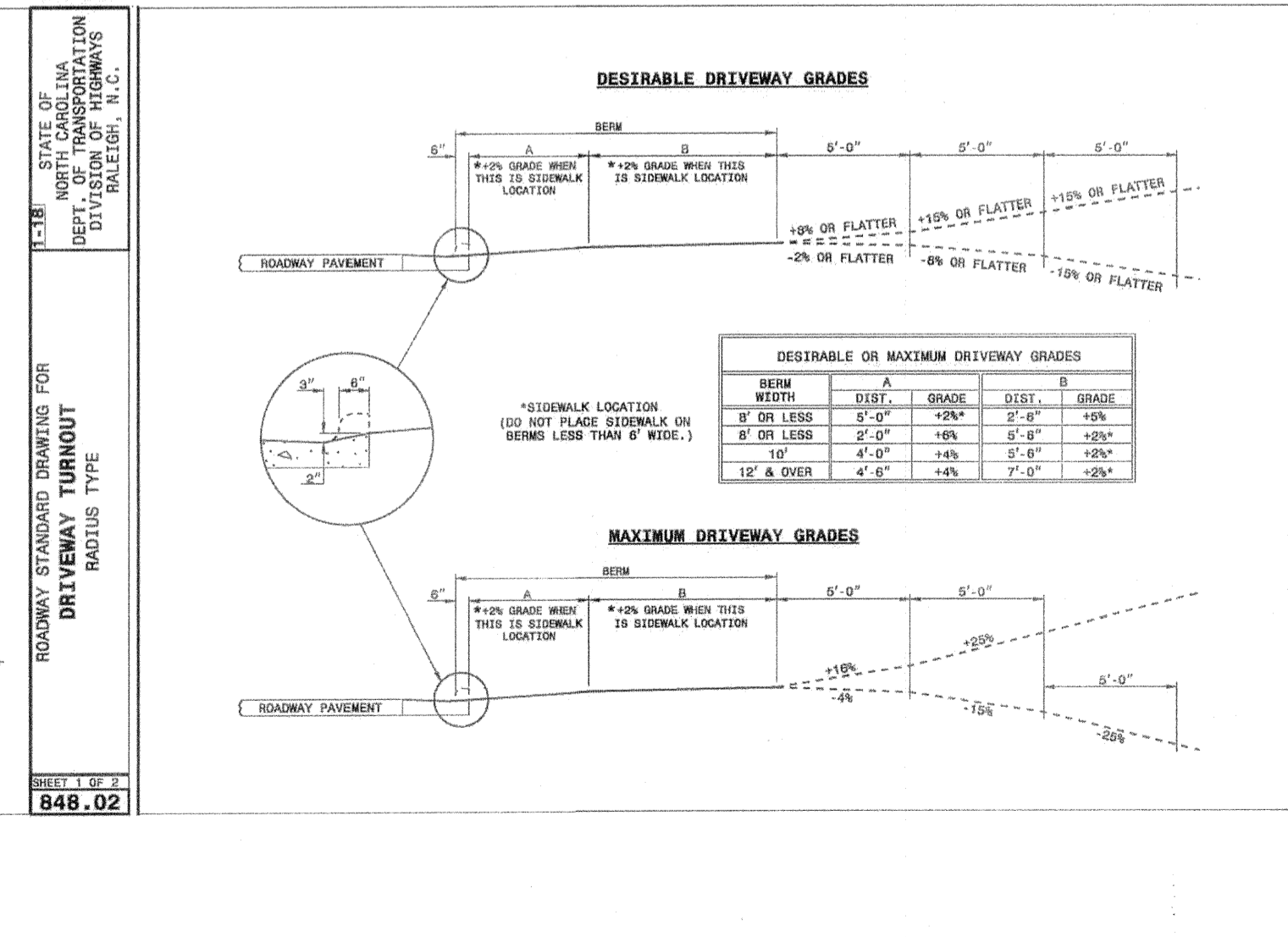
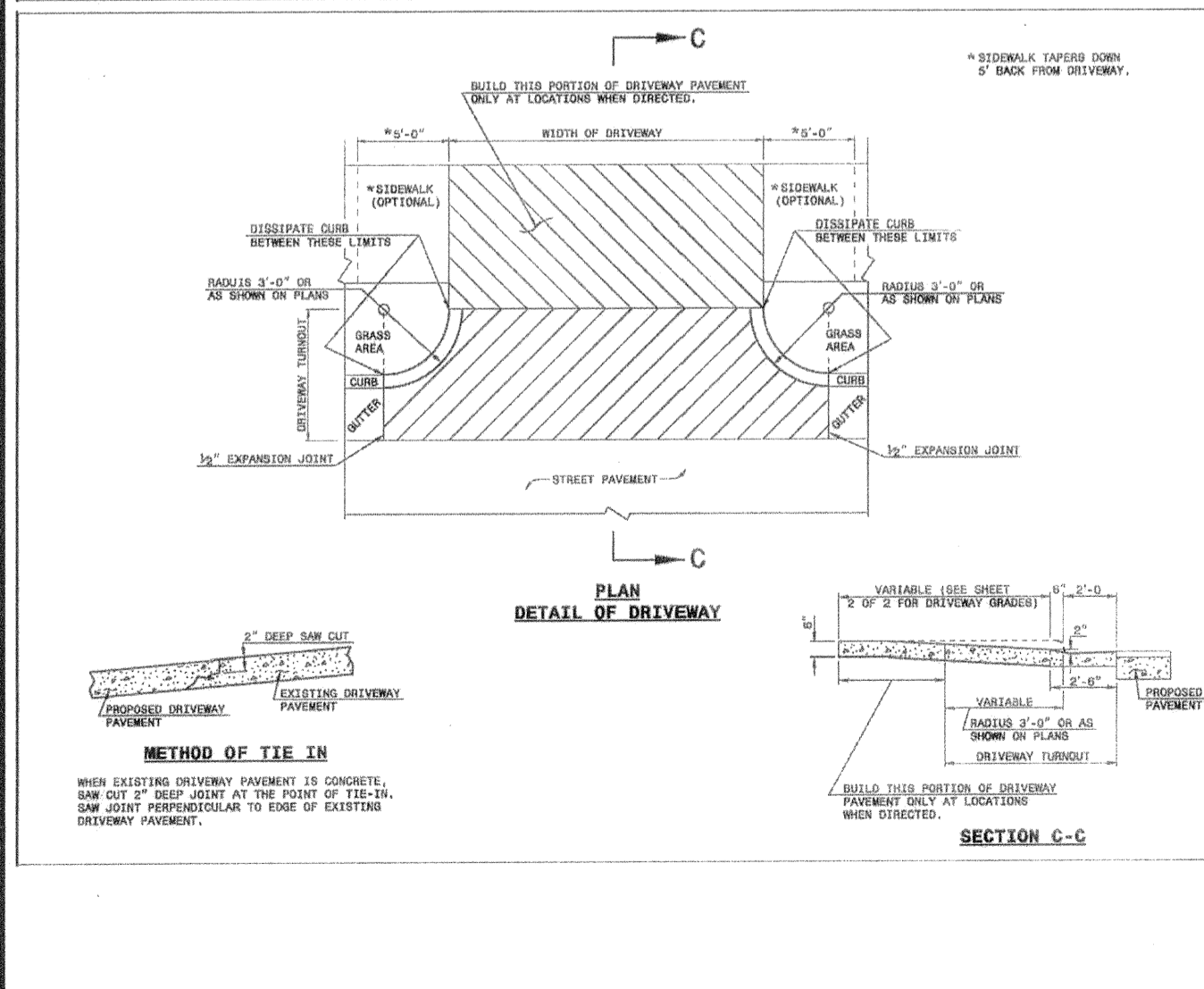
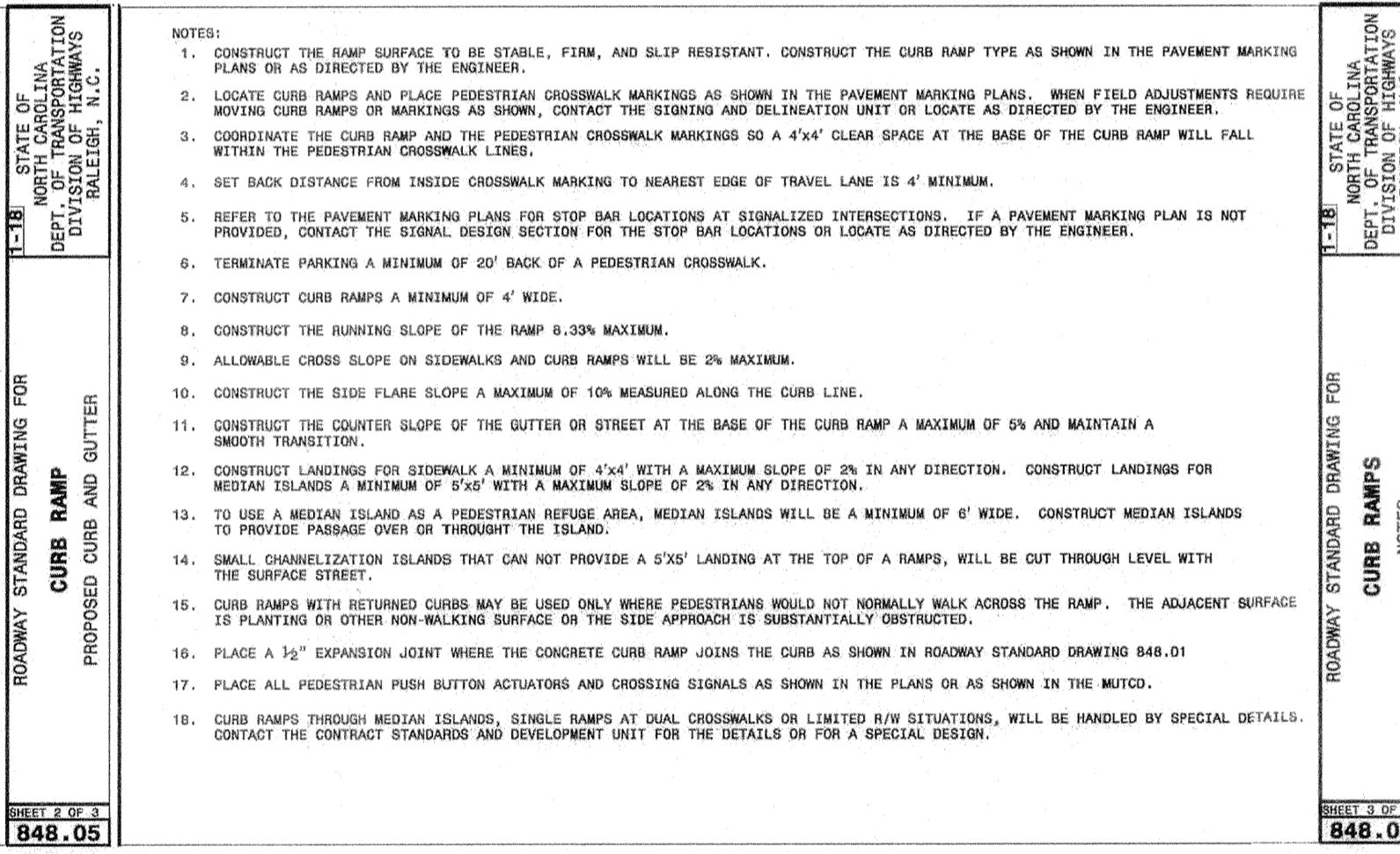
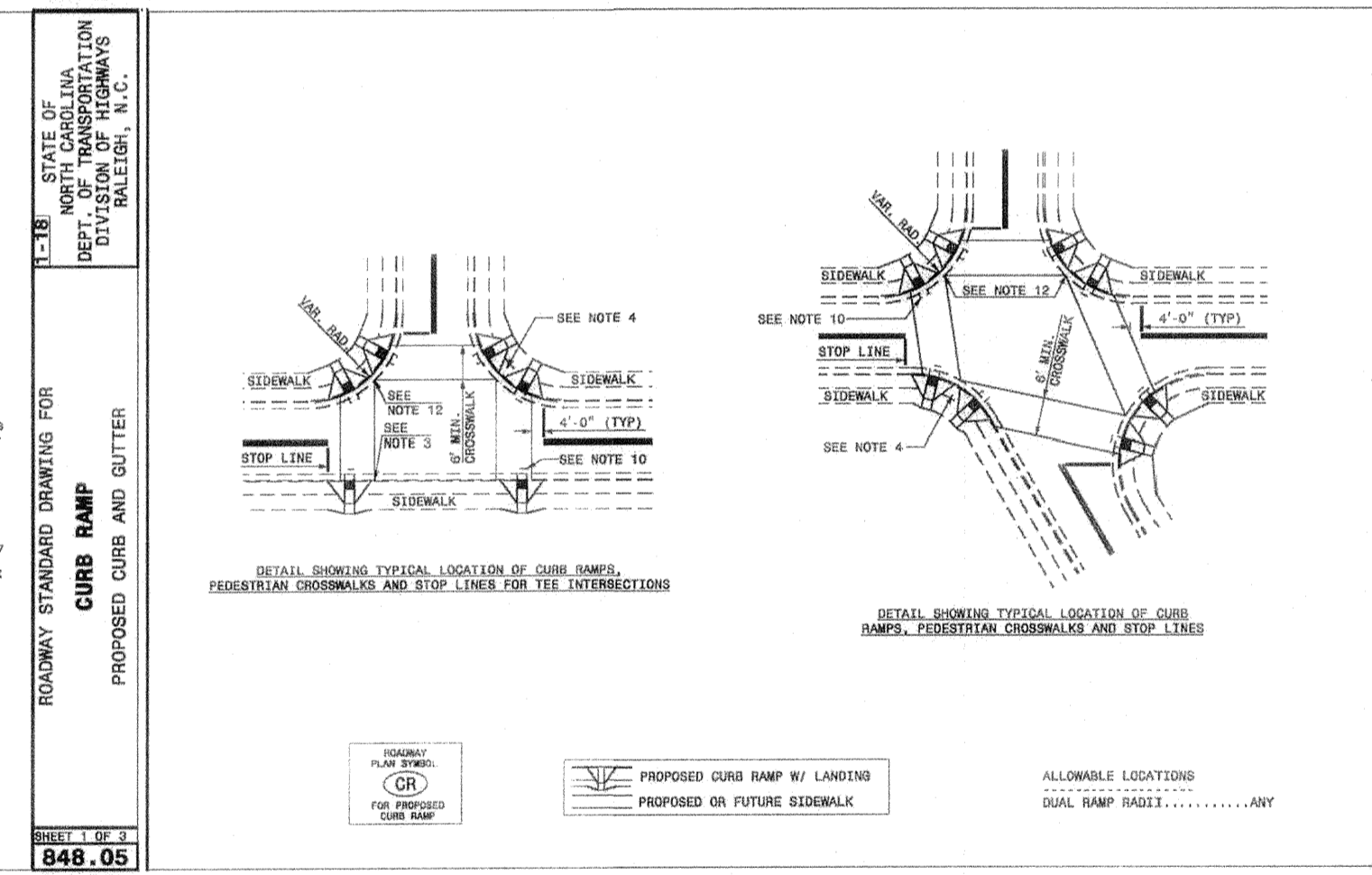
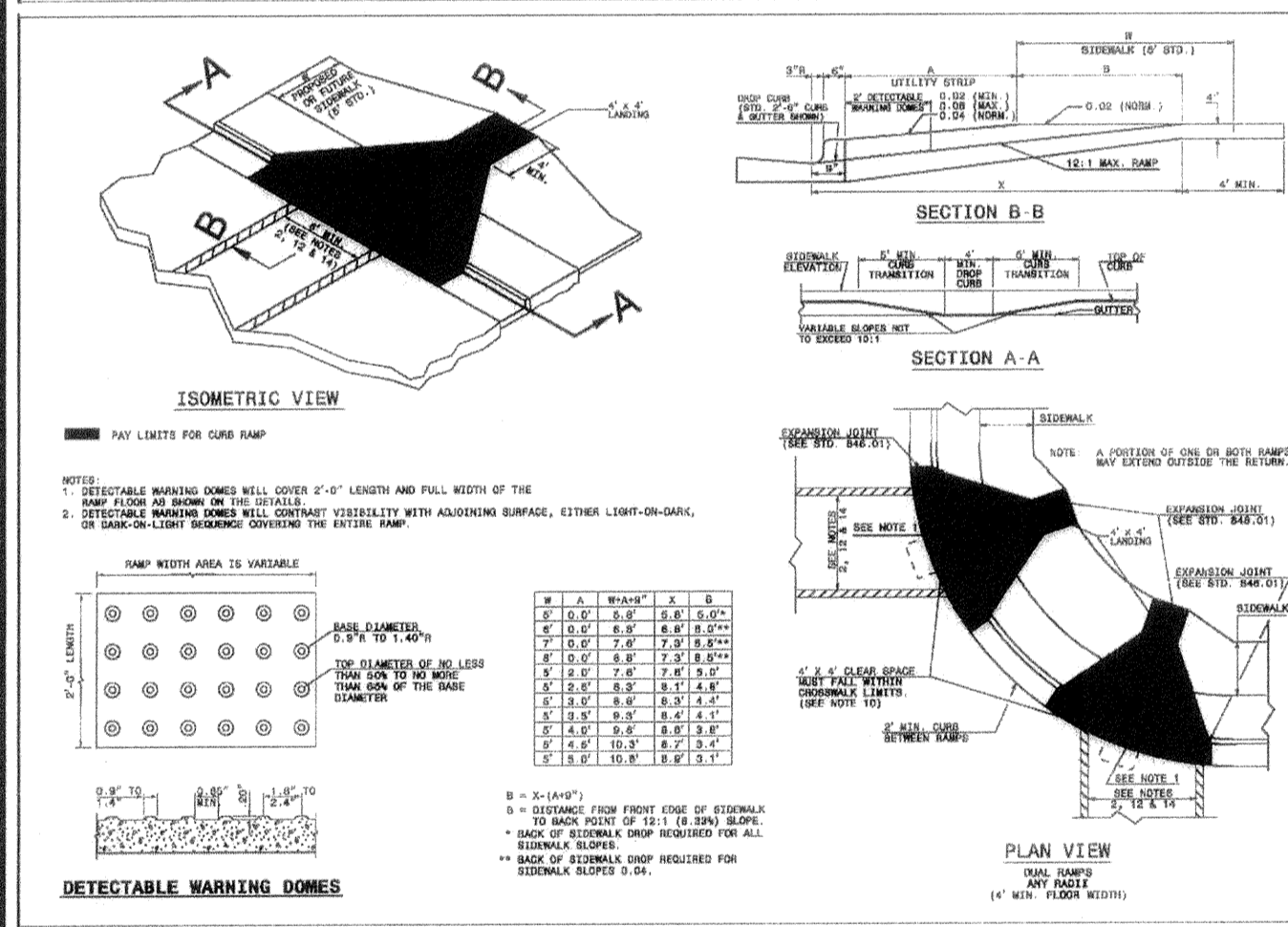
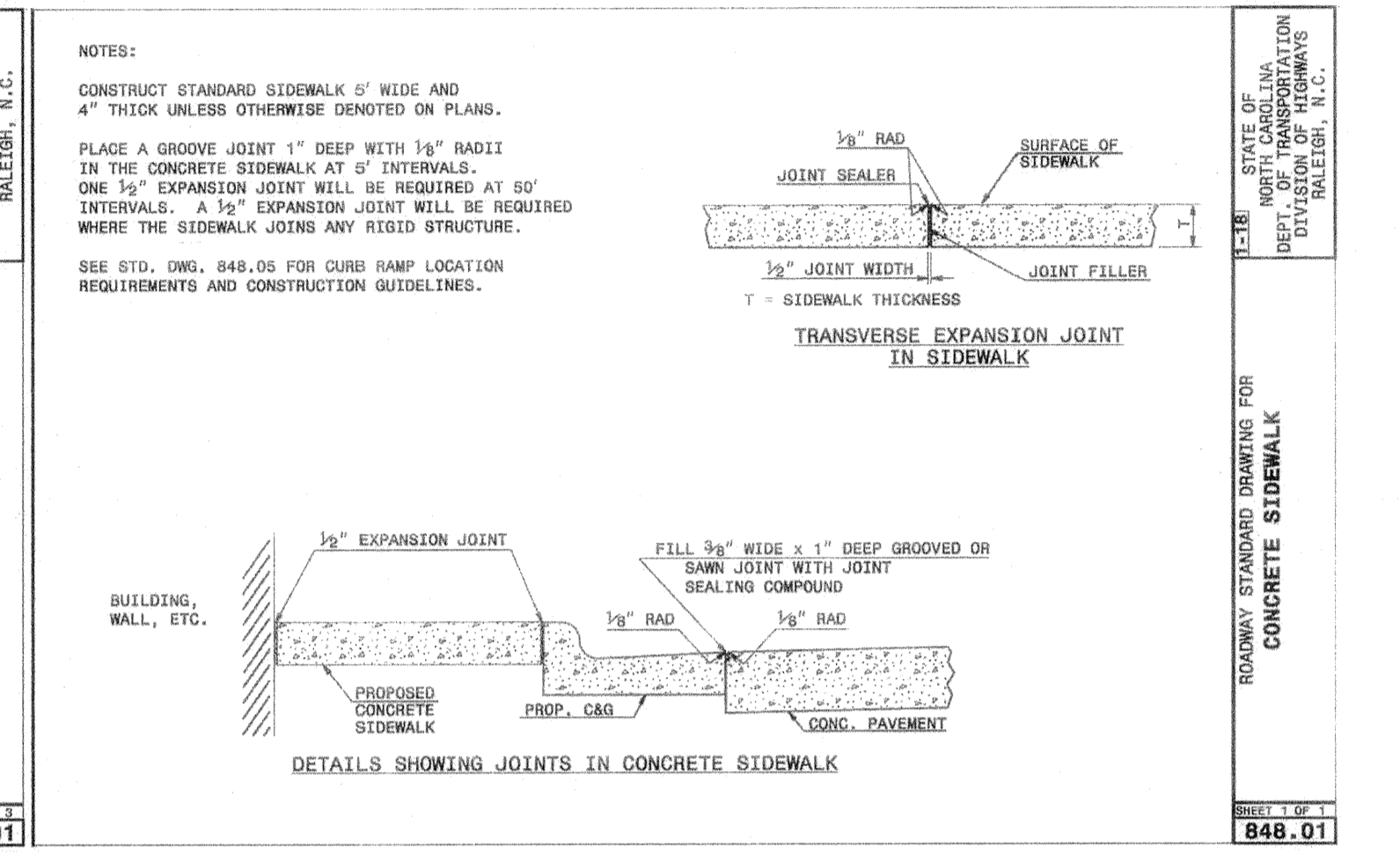
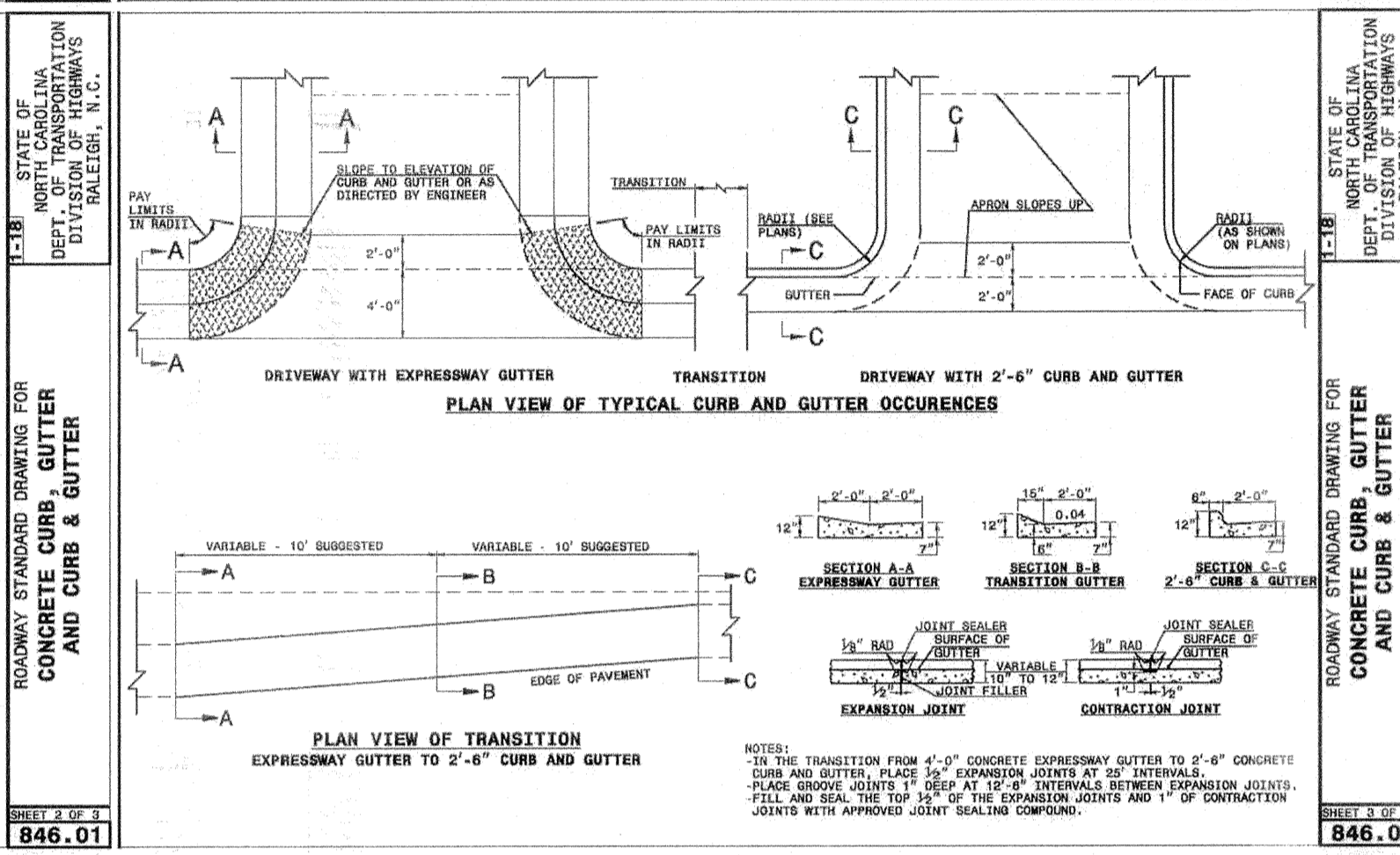
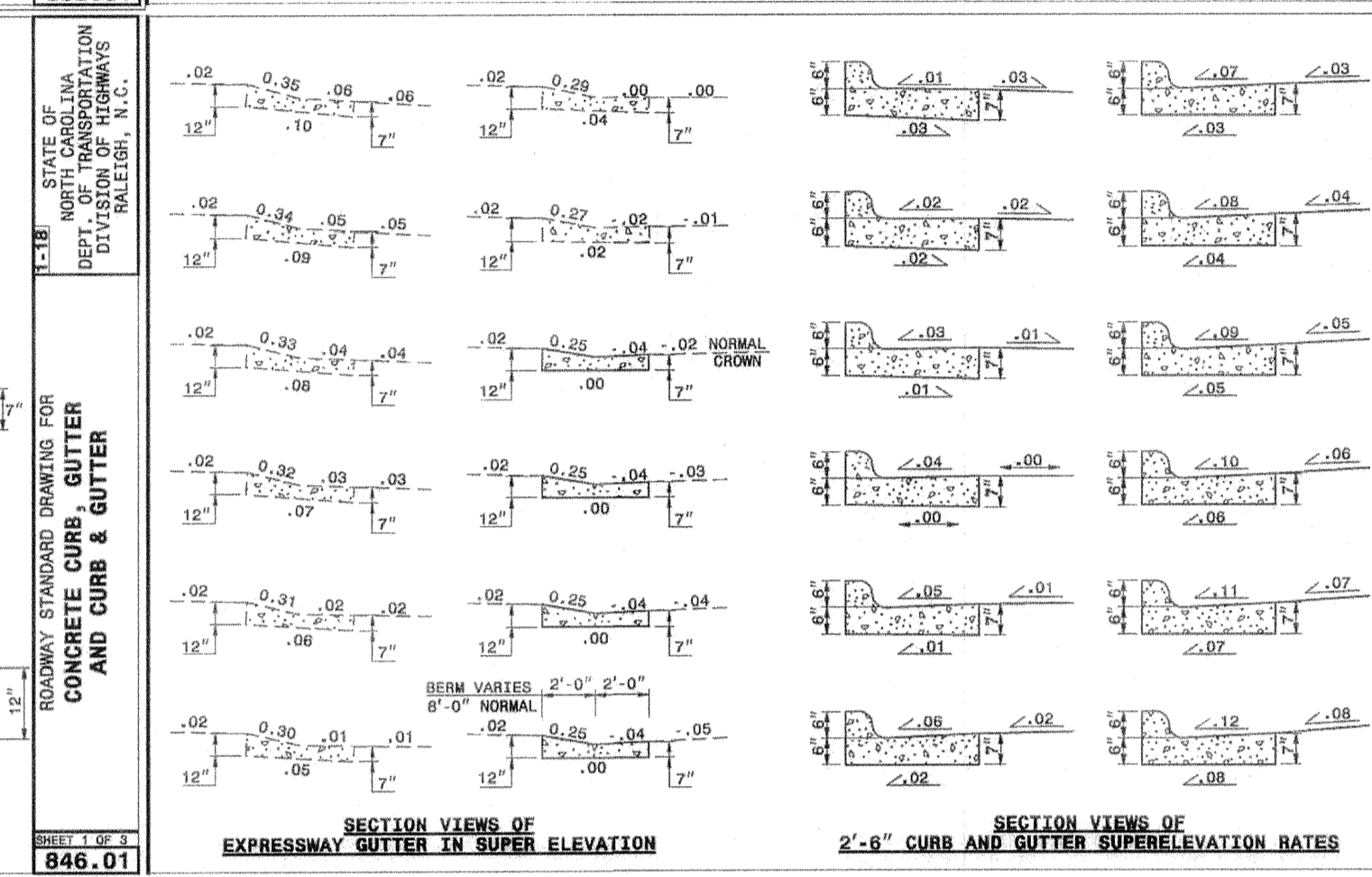
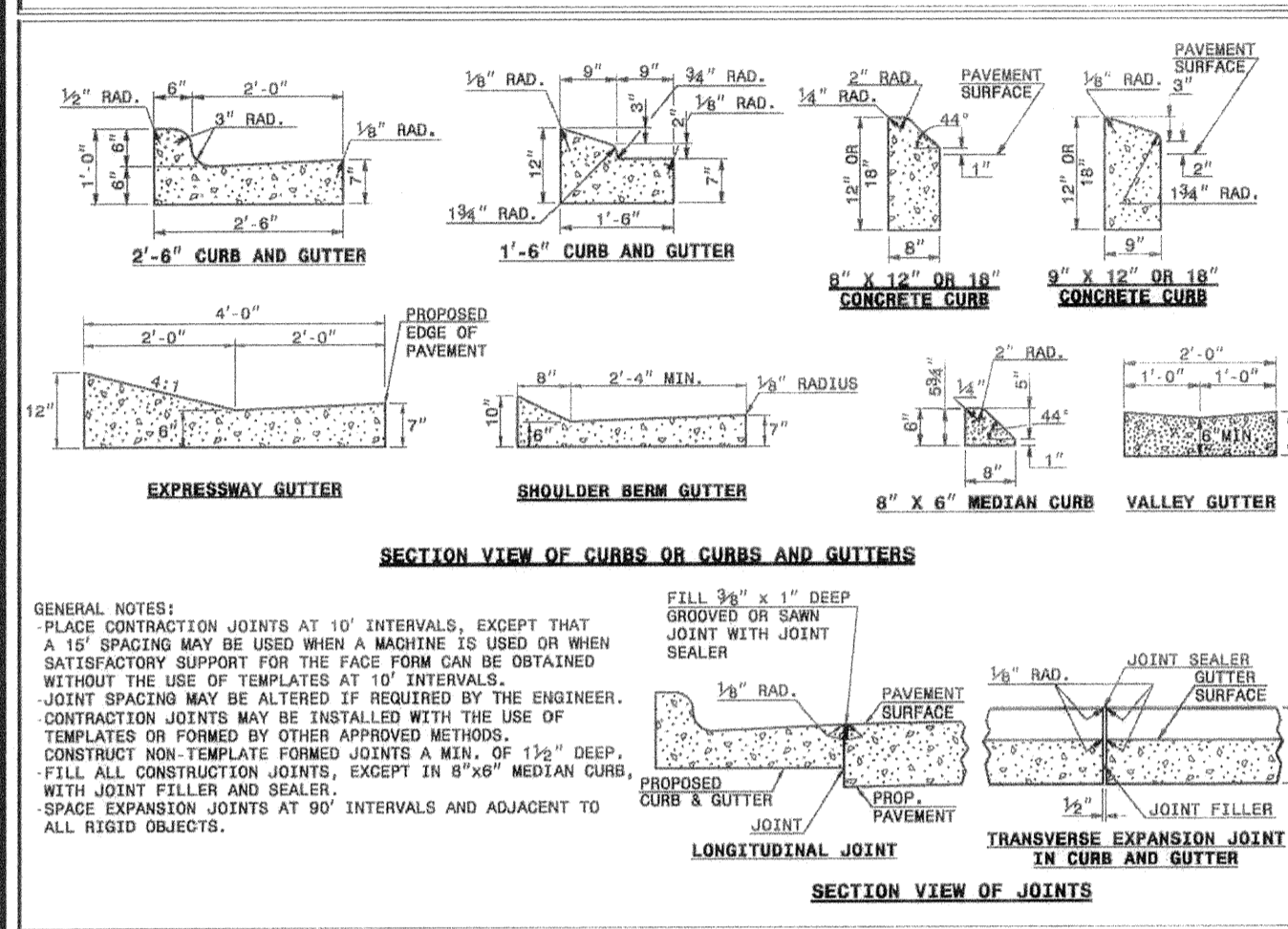
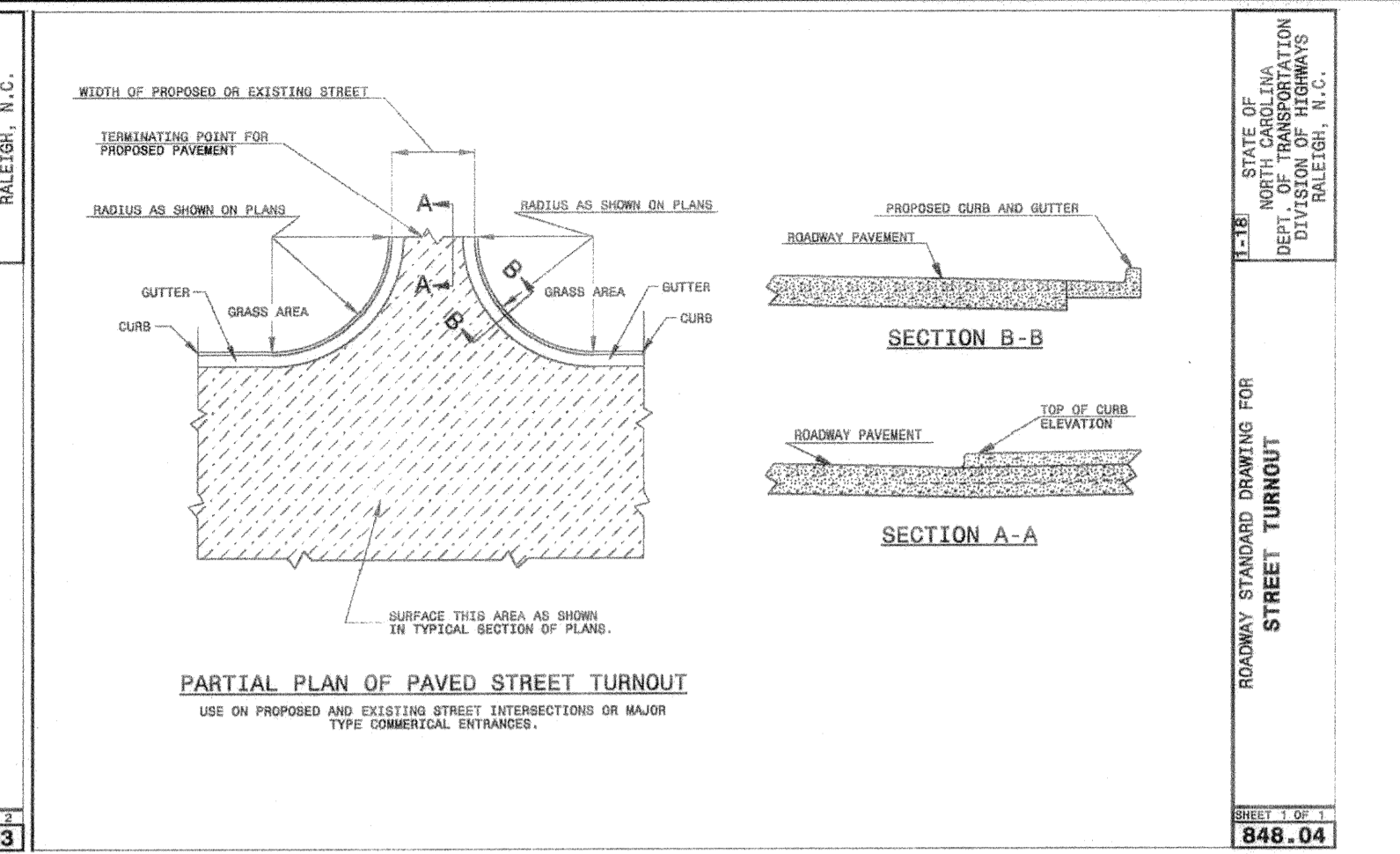
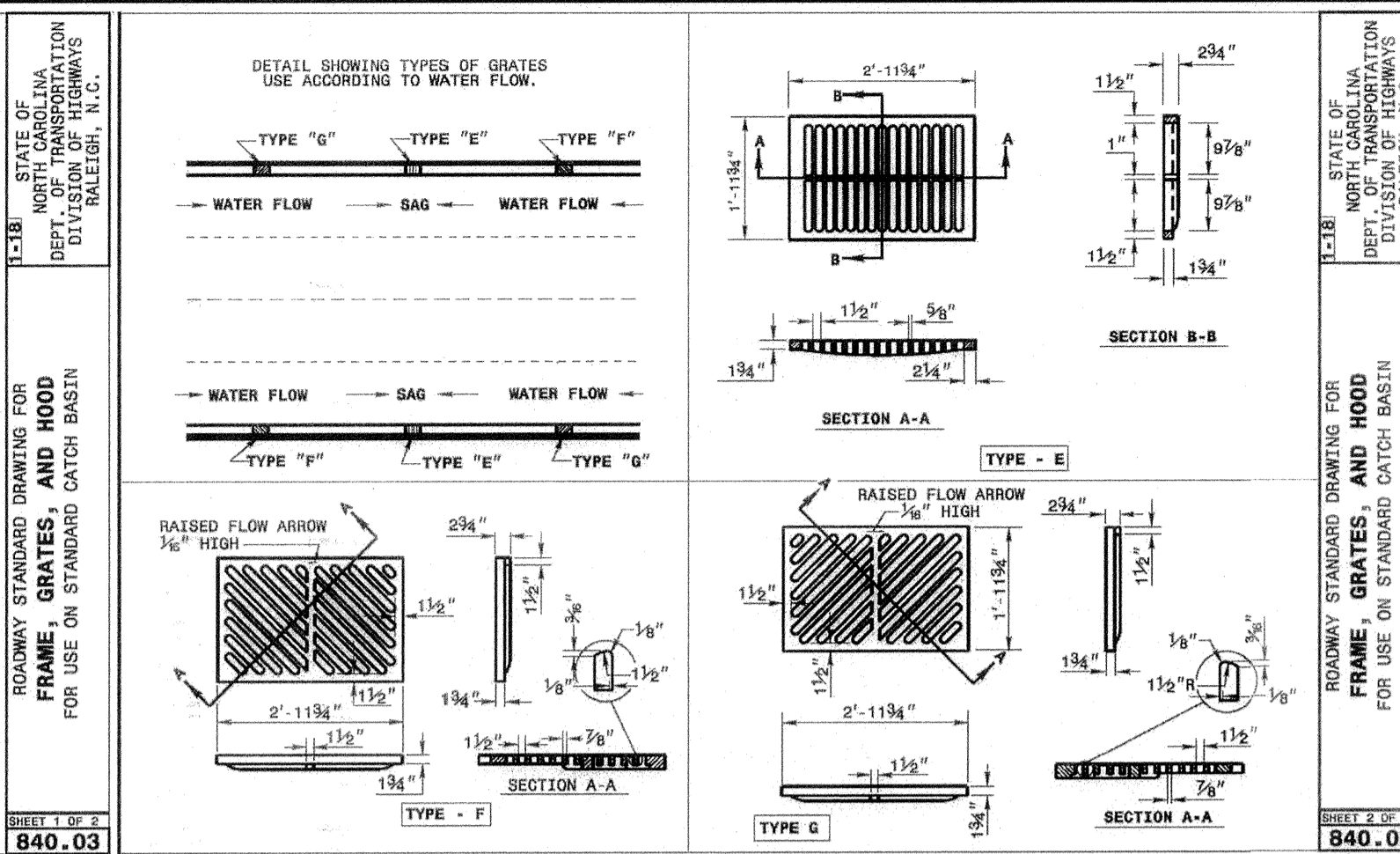
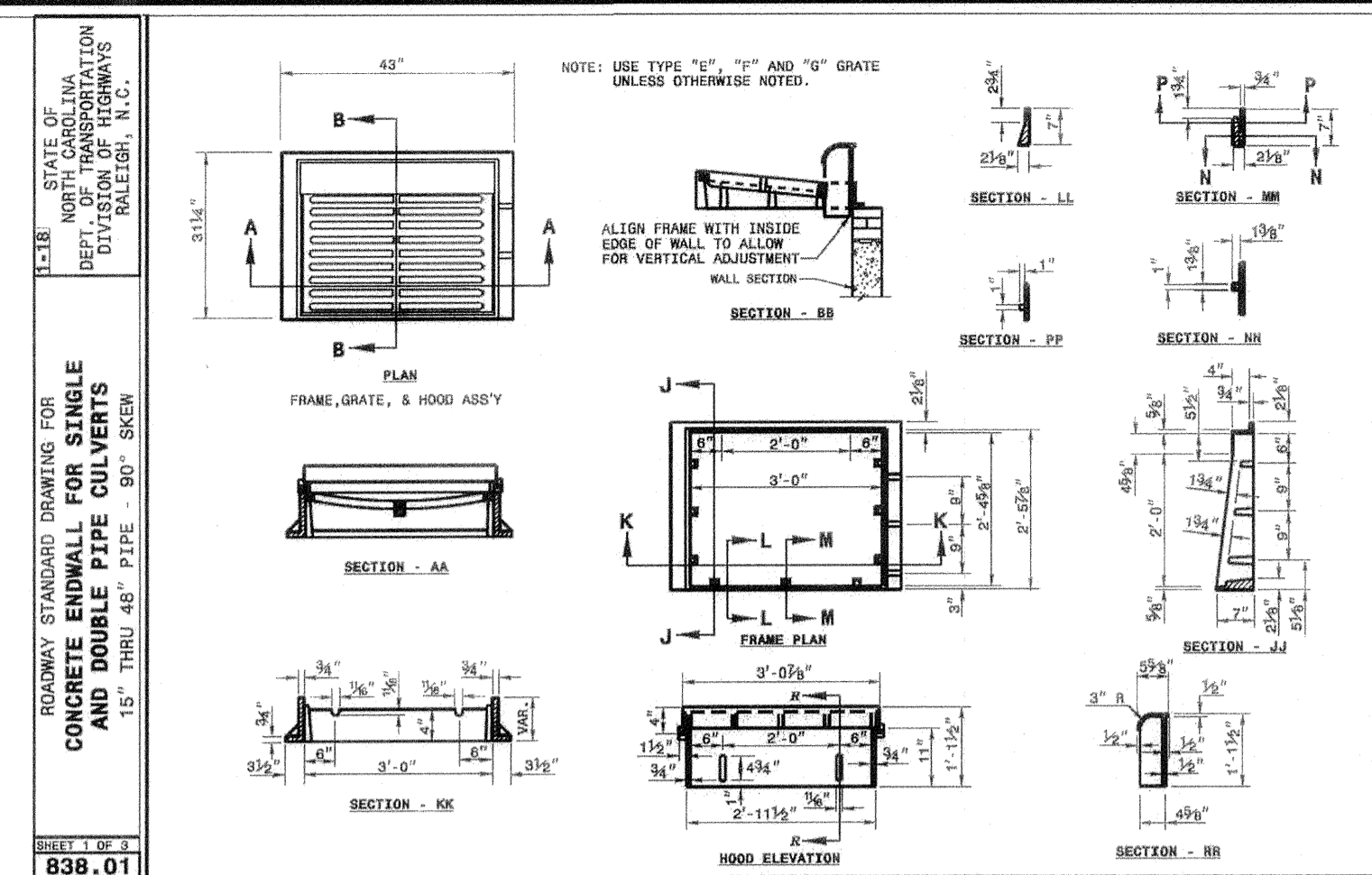
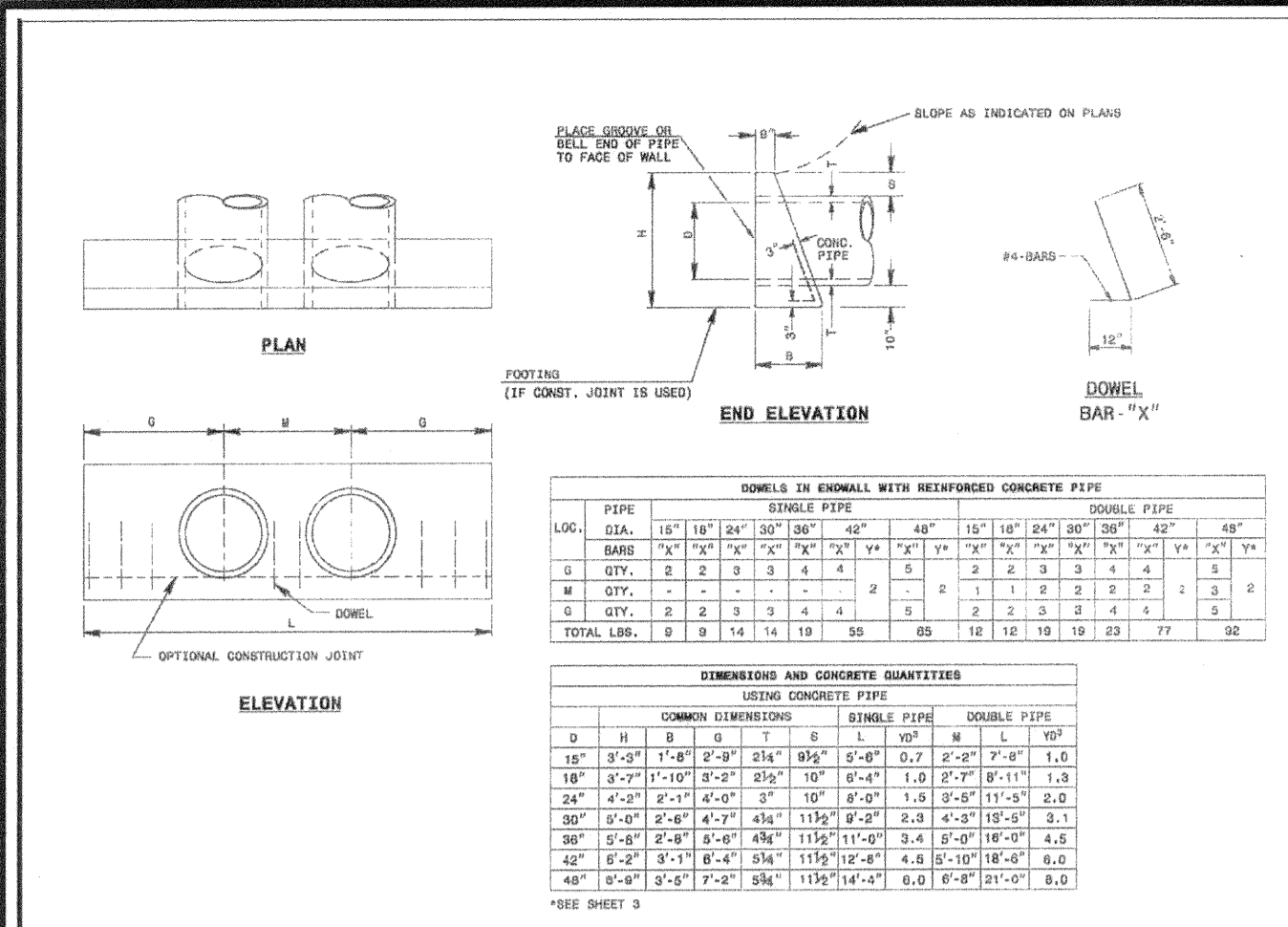


**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**NCDOT DETAILS**

Project Engineer:	TSS
Designed By:	RAJ
Drawn By:	RAJ
Checked By:	TSS
Scale:	NTS
Date:	10/30/2018
Project Number:	170348
SHEET	<b>C805</b>

ELIZABETH HEIGHTS

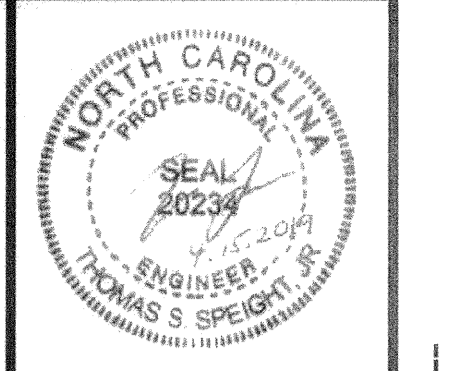


REV. NO.	DESCRIPTION	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

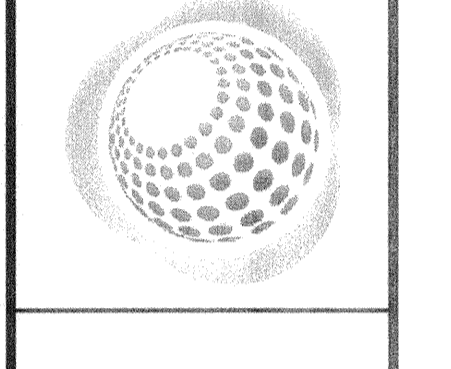
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1	REVISED PER TOR COMMENTS	12/07/2018

REV. NO.	DESCRIPTION	DATE
1	REVISED PER TOR COMMENTS	12/07/2018

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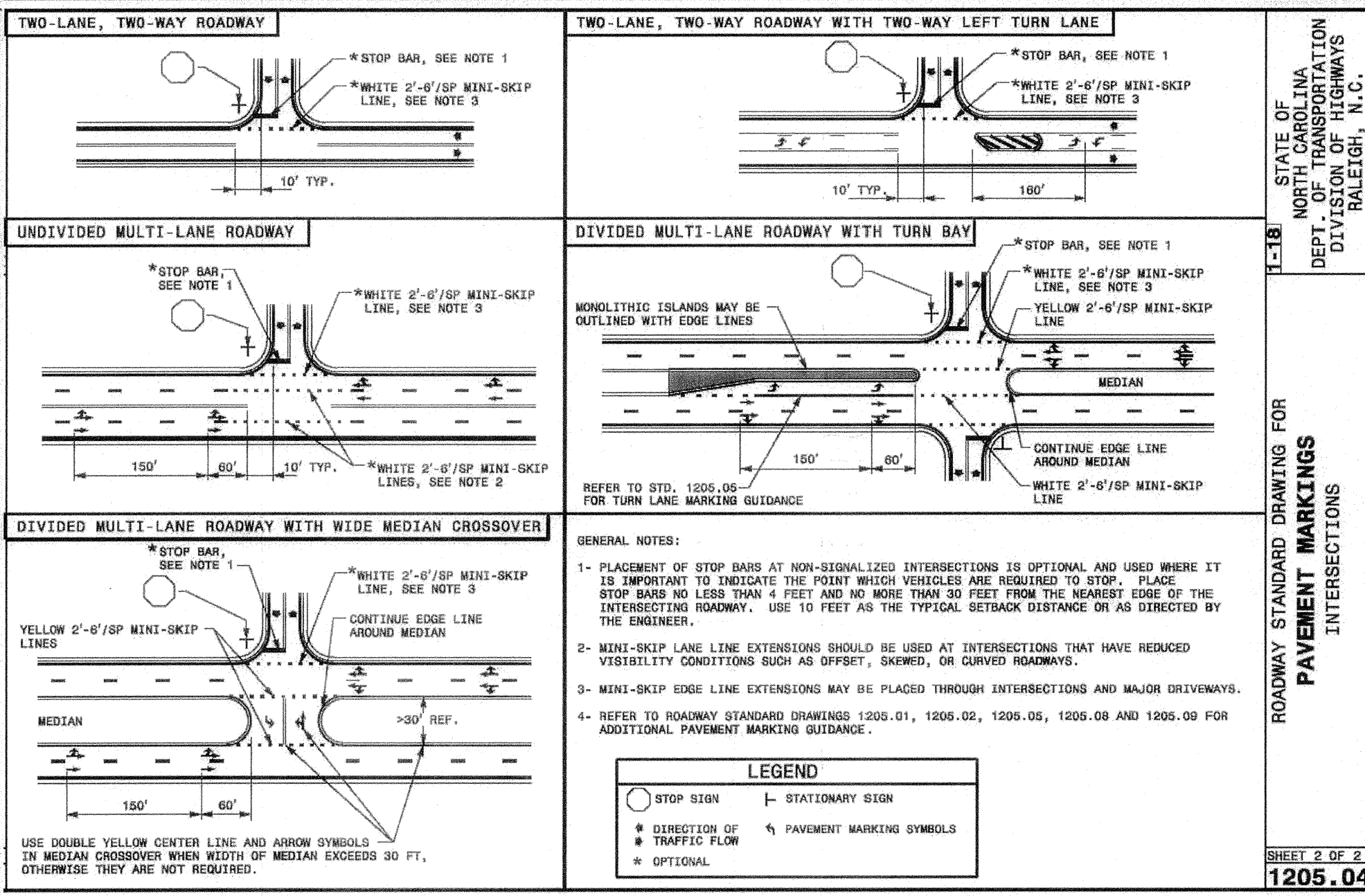
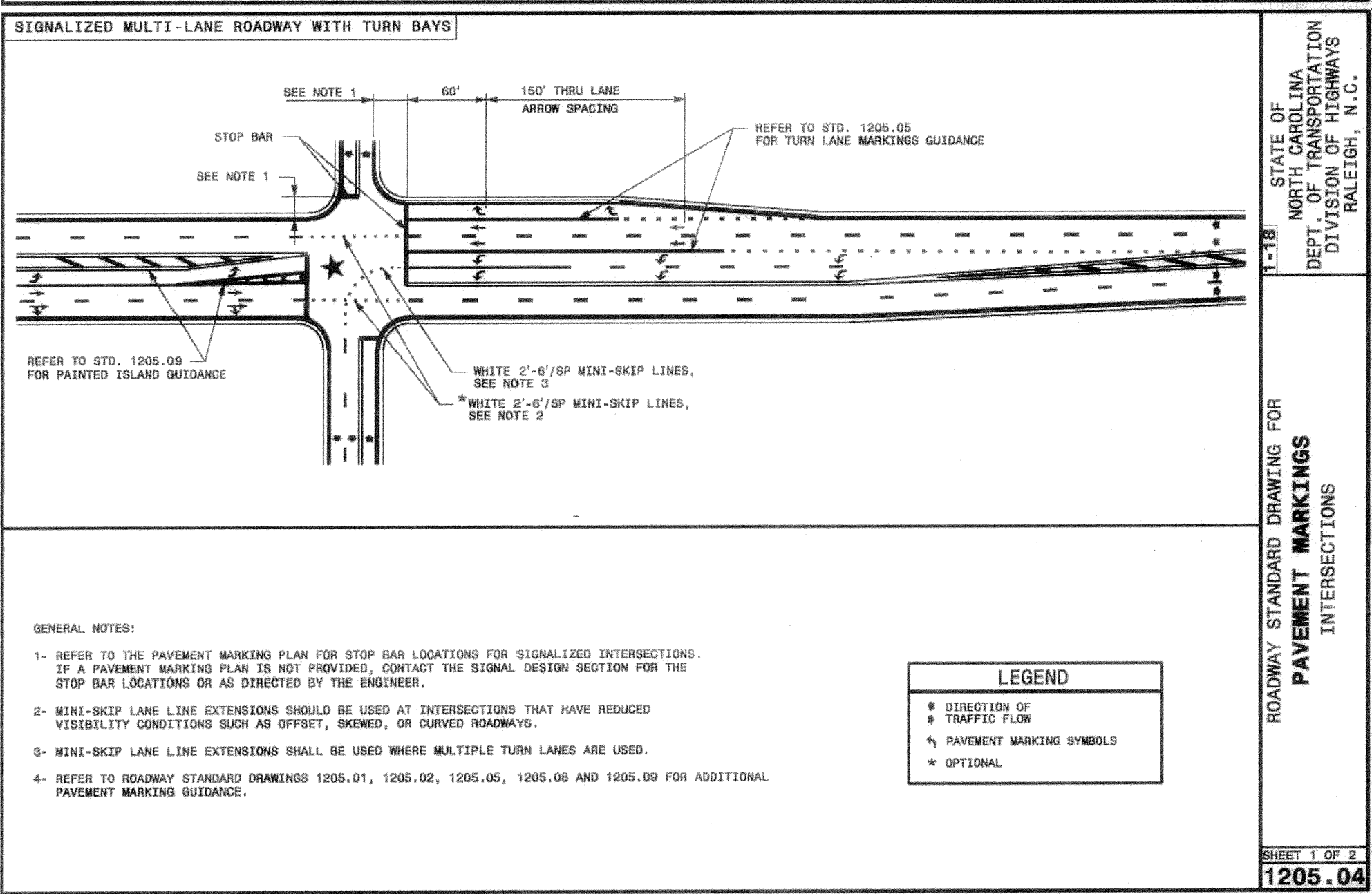
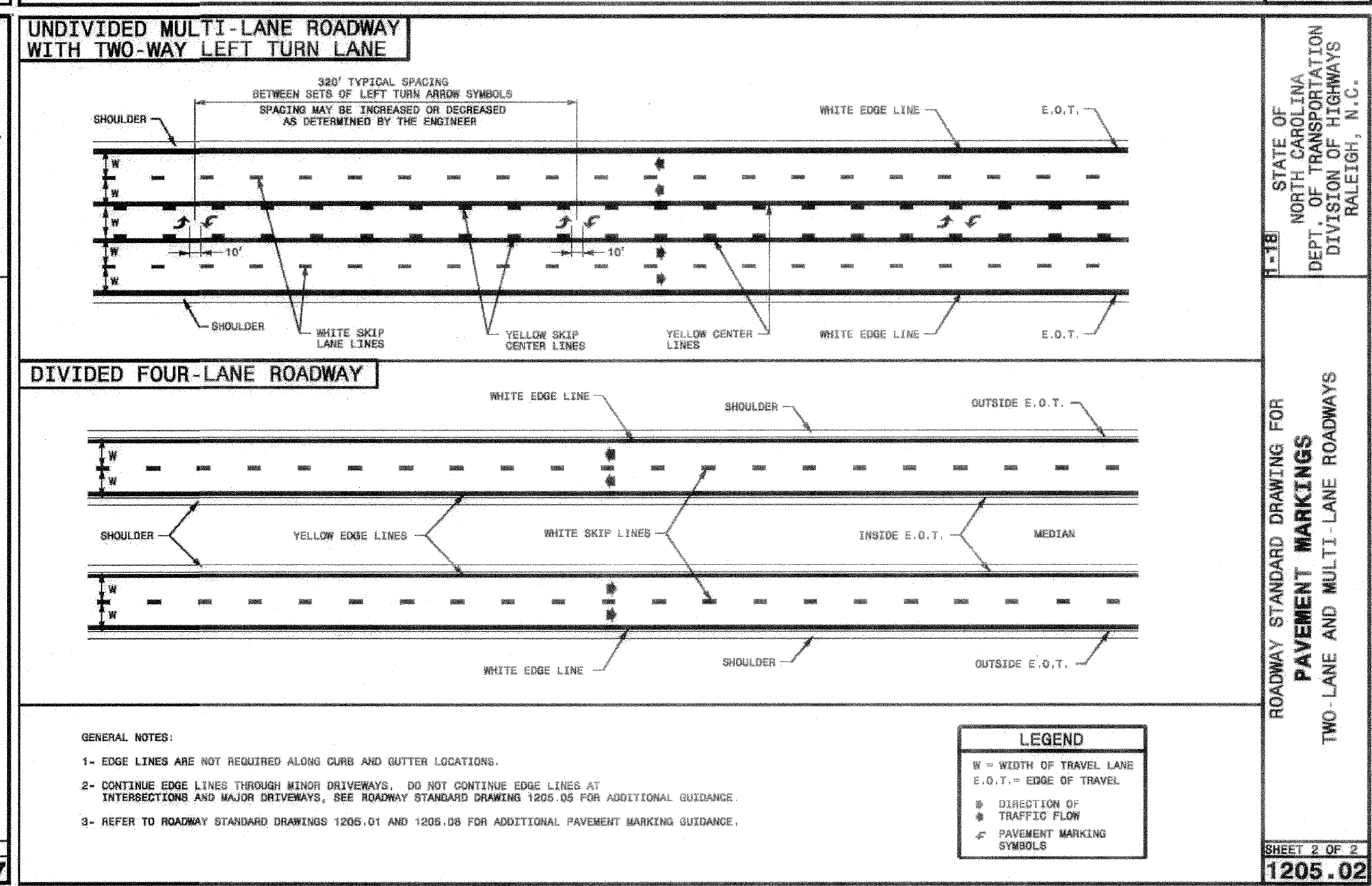
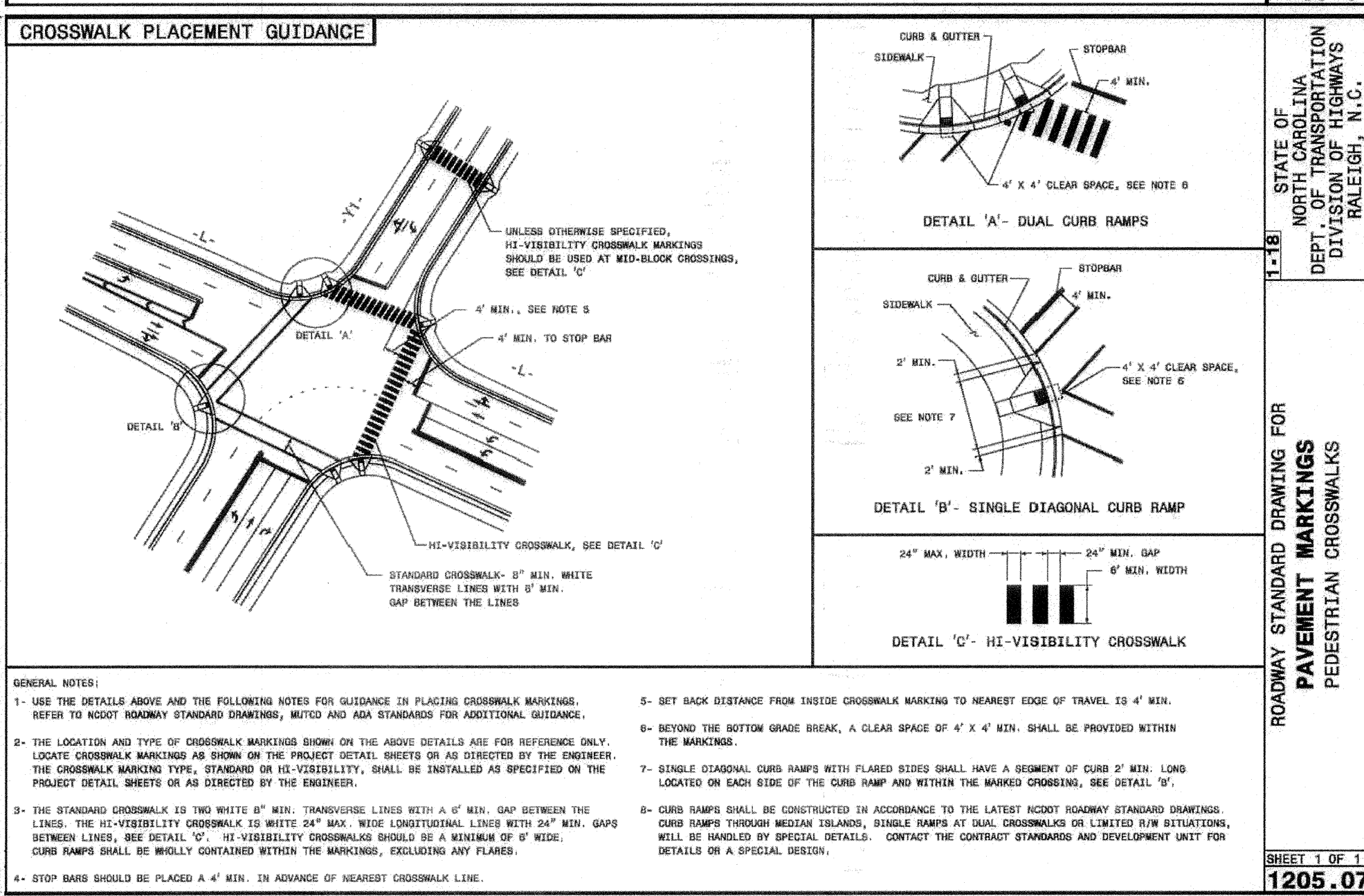
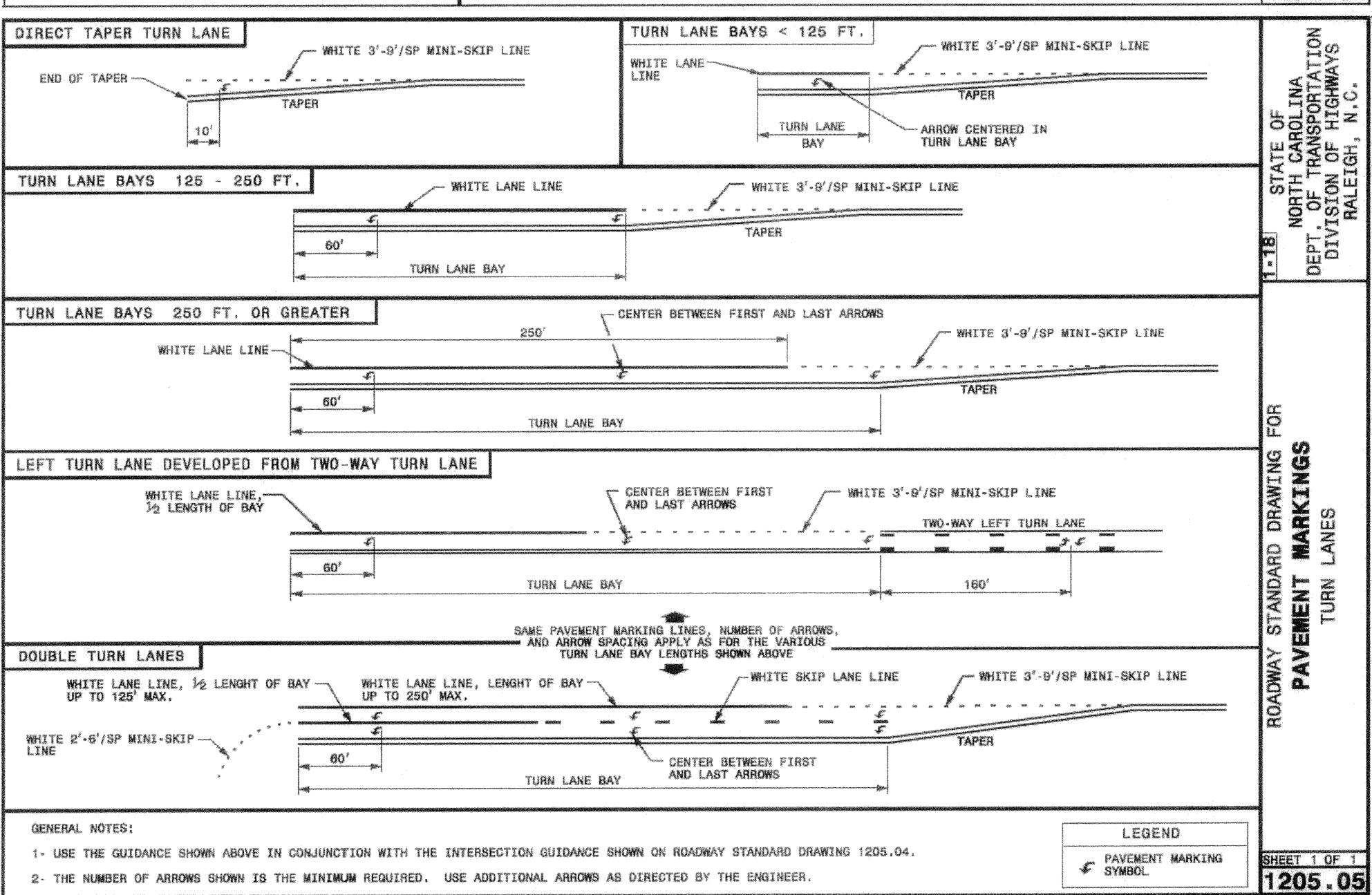
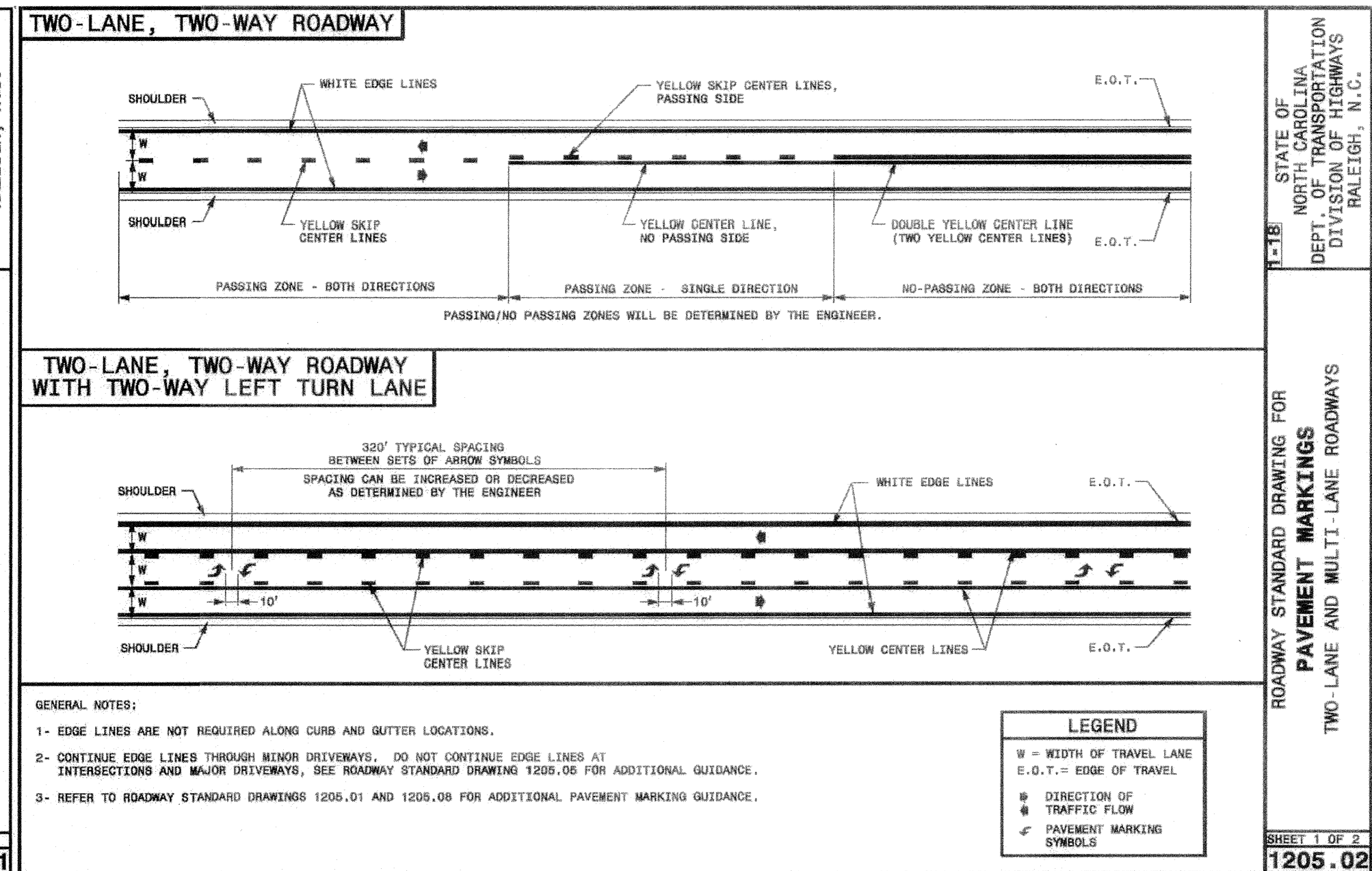
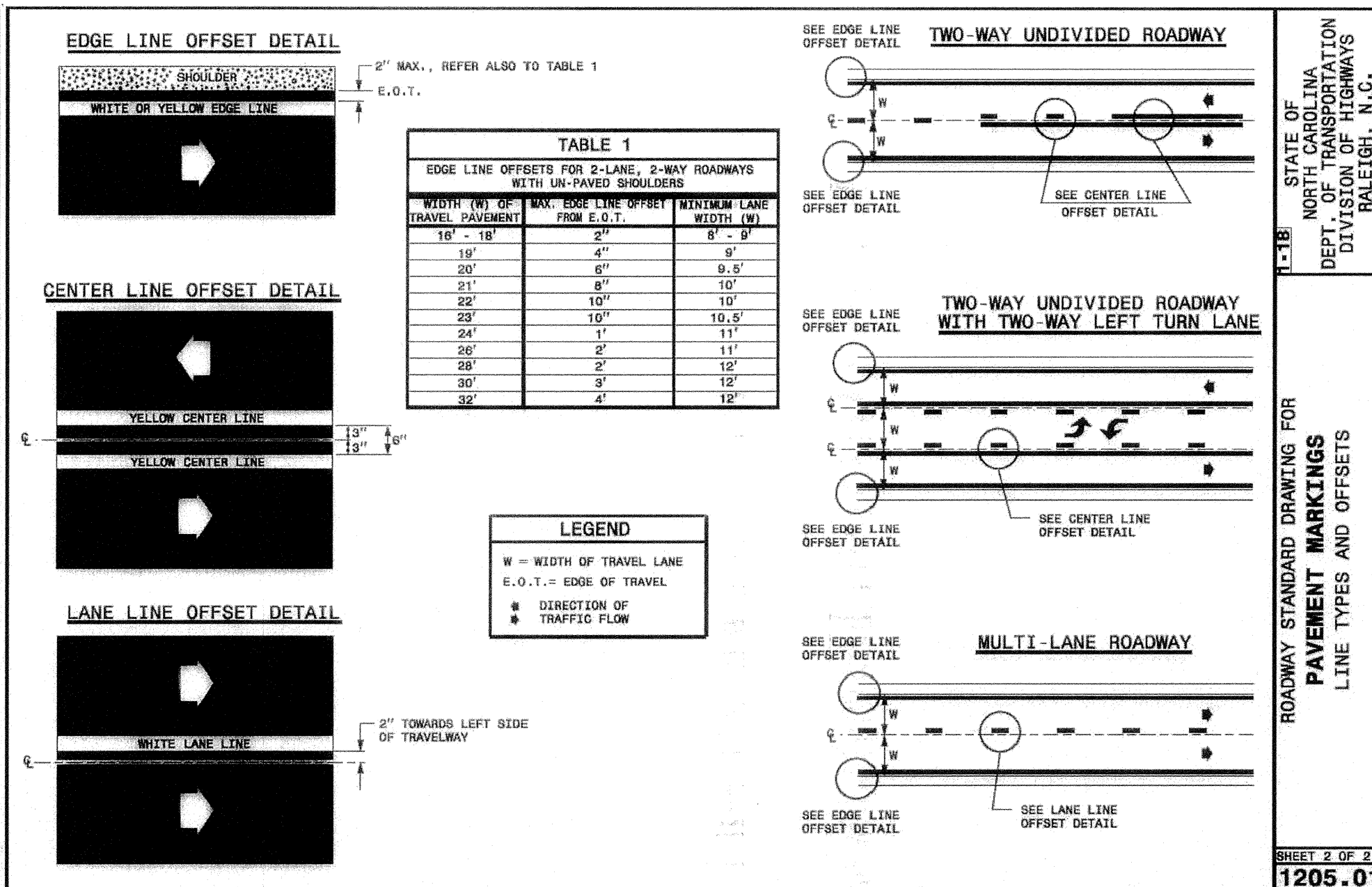
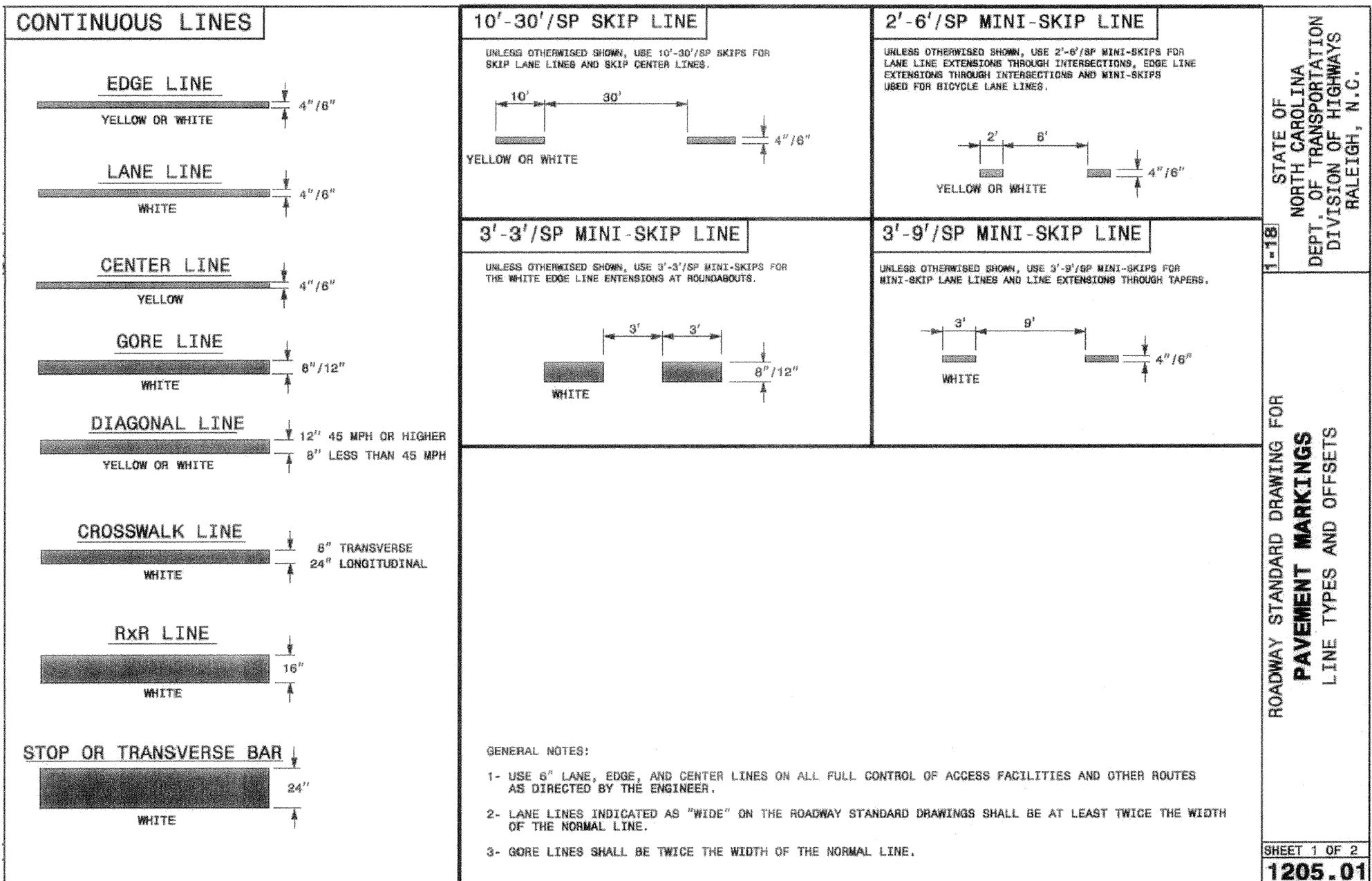
**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS

1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**NCDOT DETAILS**

Project Engineer: TSS  
 Designed By: RAJ  
 Drawn By: RAJ  
 Checked By: TSS  
 Scale: NTS  
 Date: 10/30/2018  
 Project Number: 170348

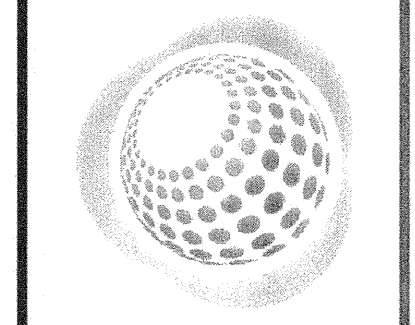
SHEET  
**C806**



REVNO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018



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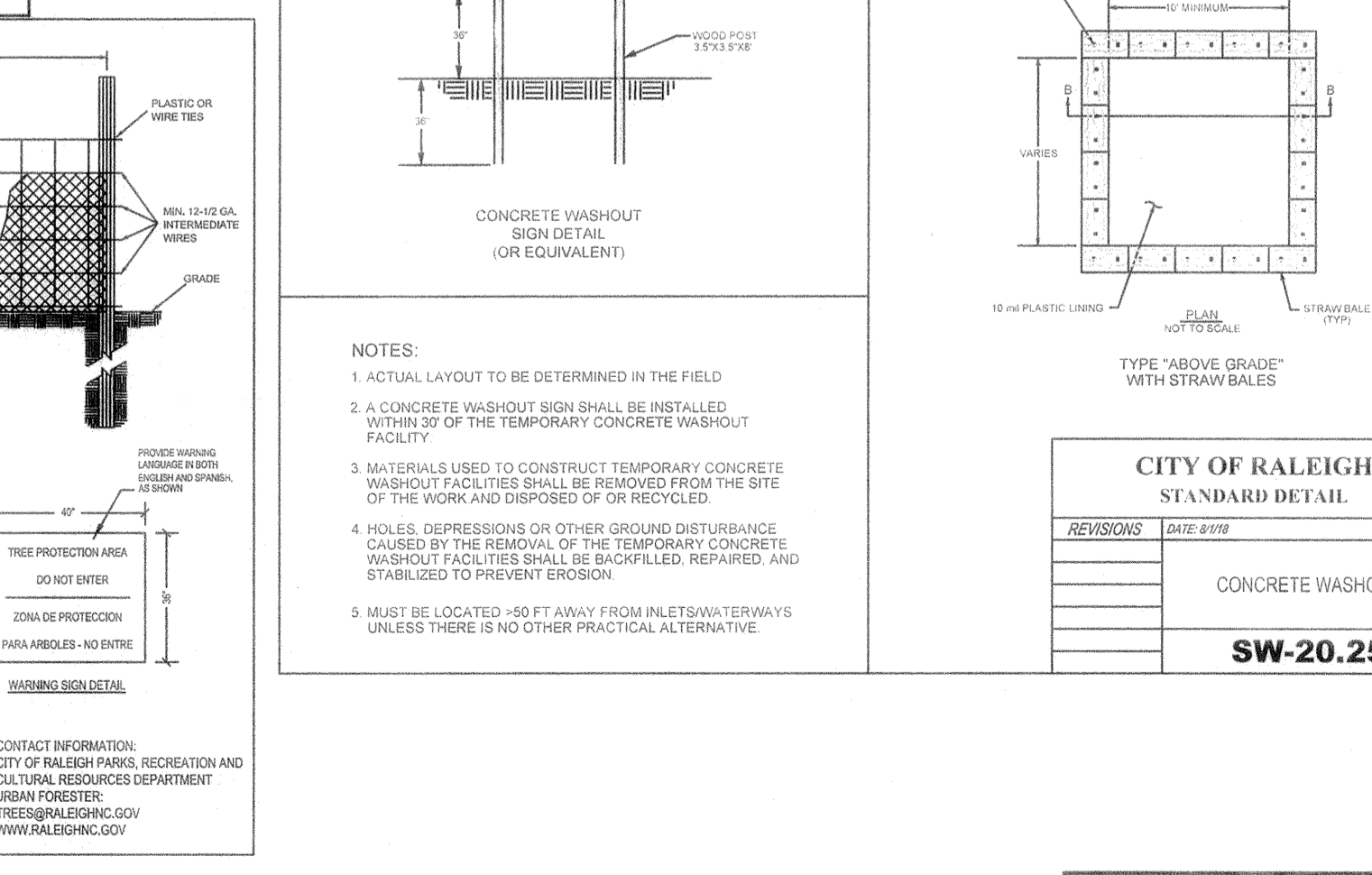
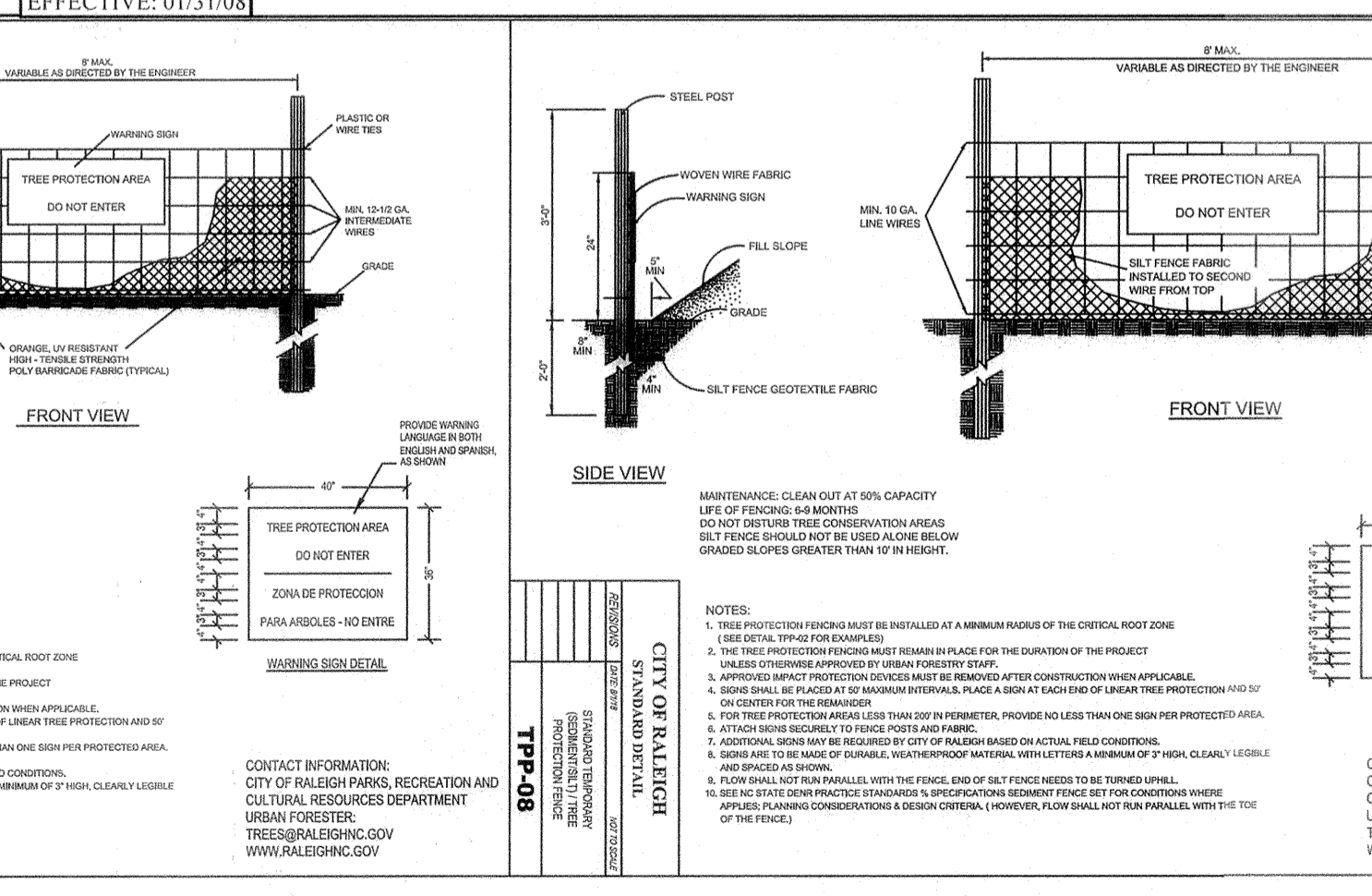
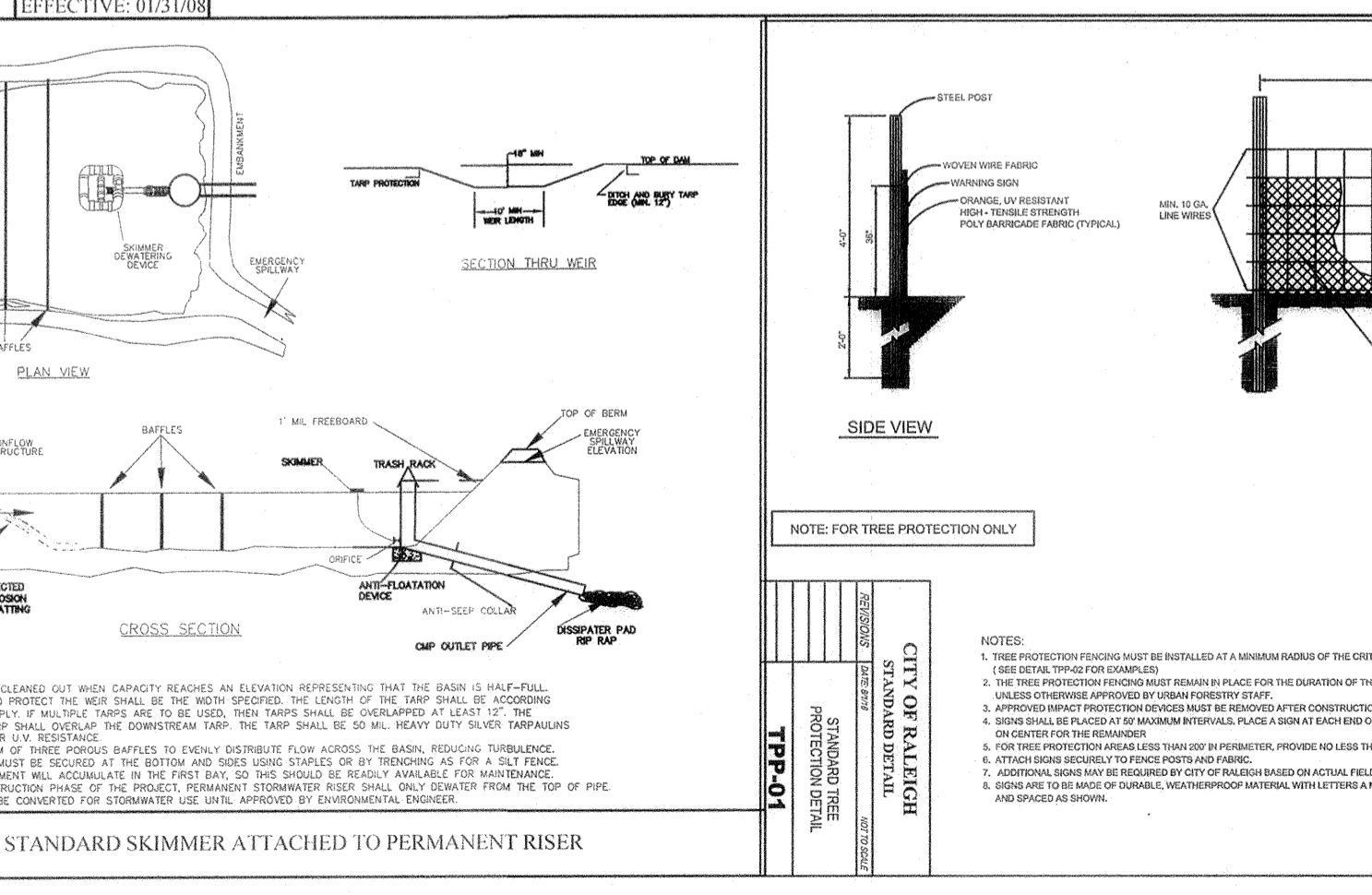
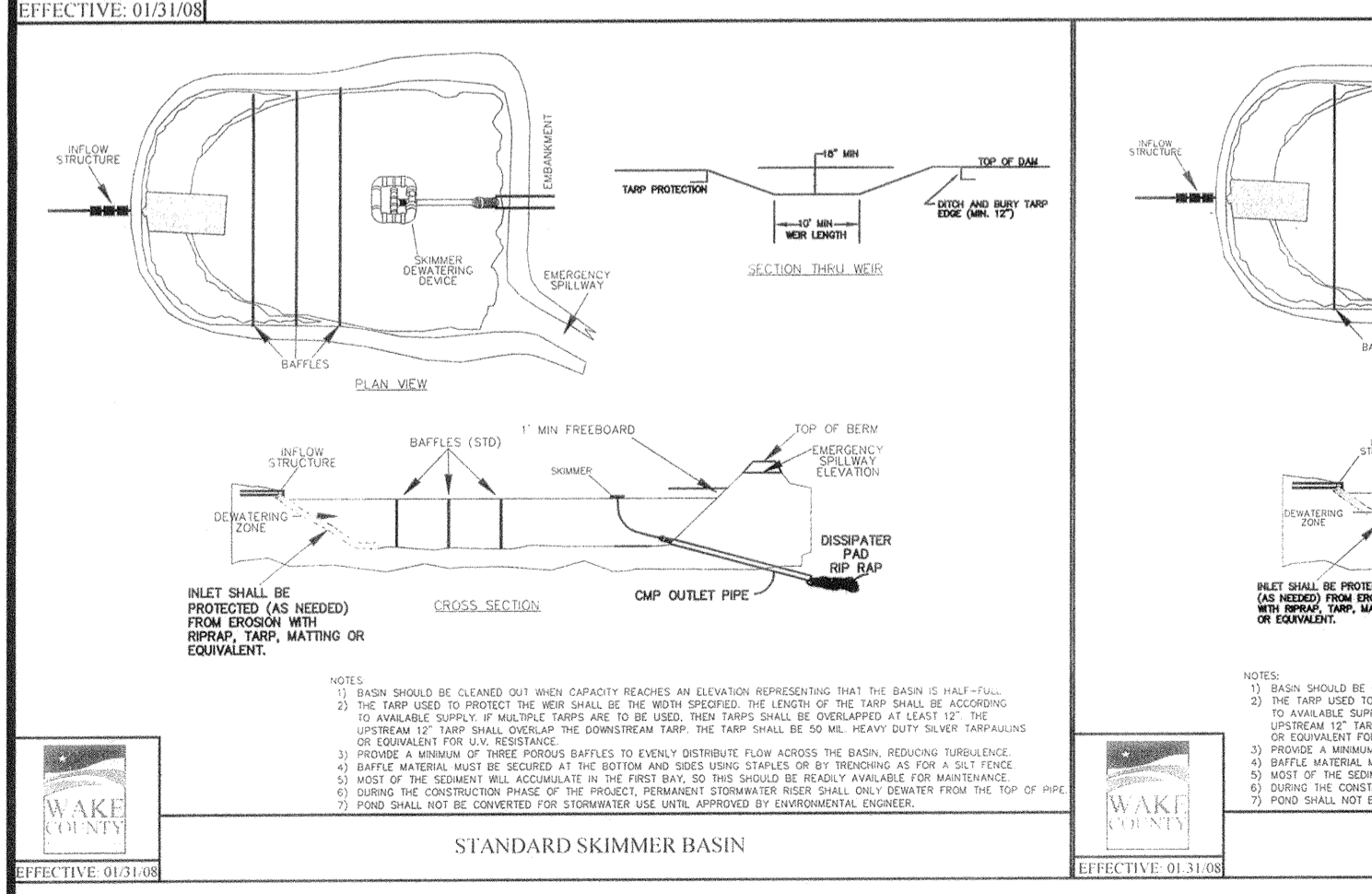
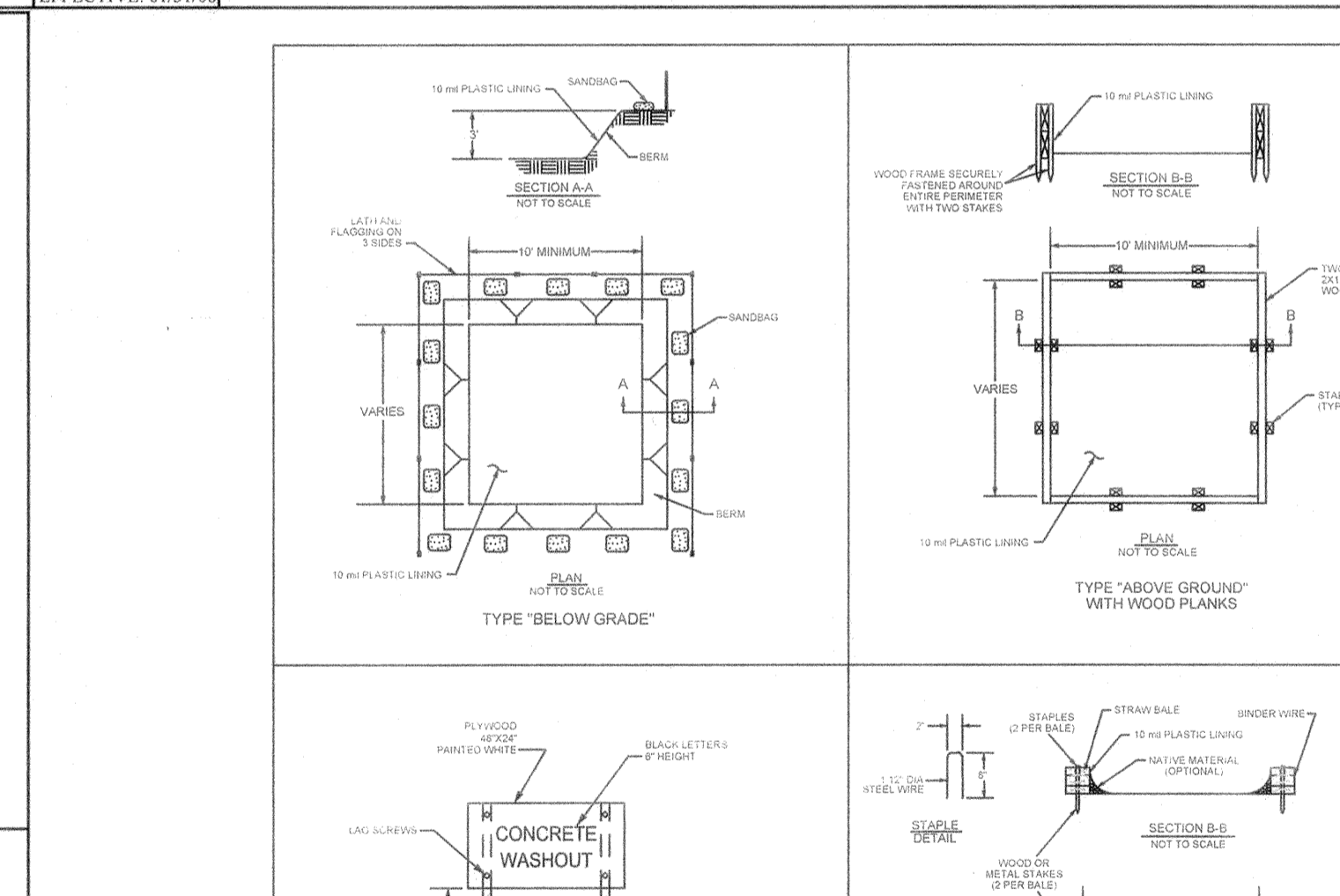
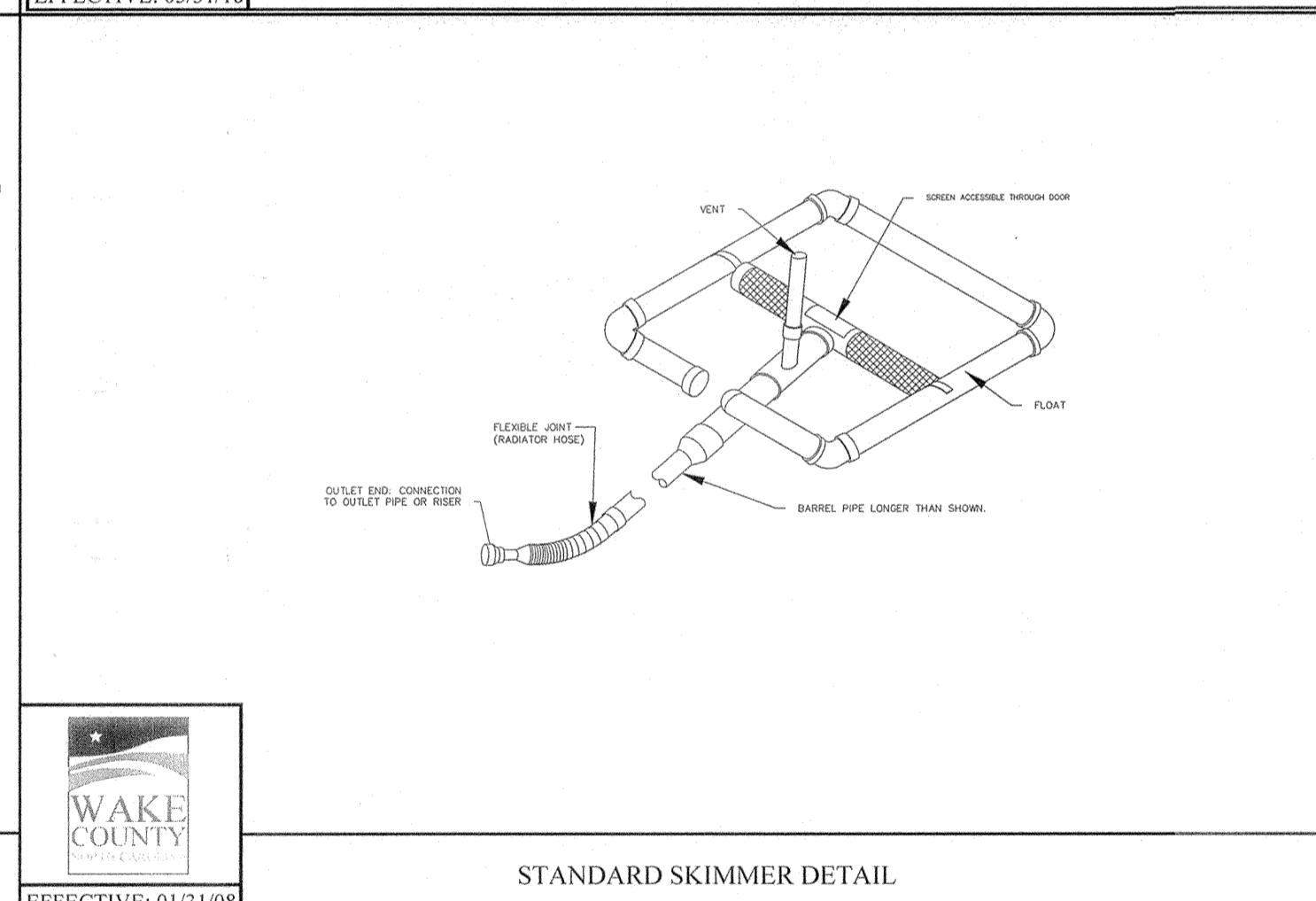
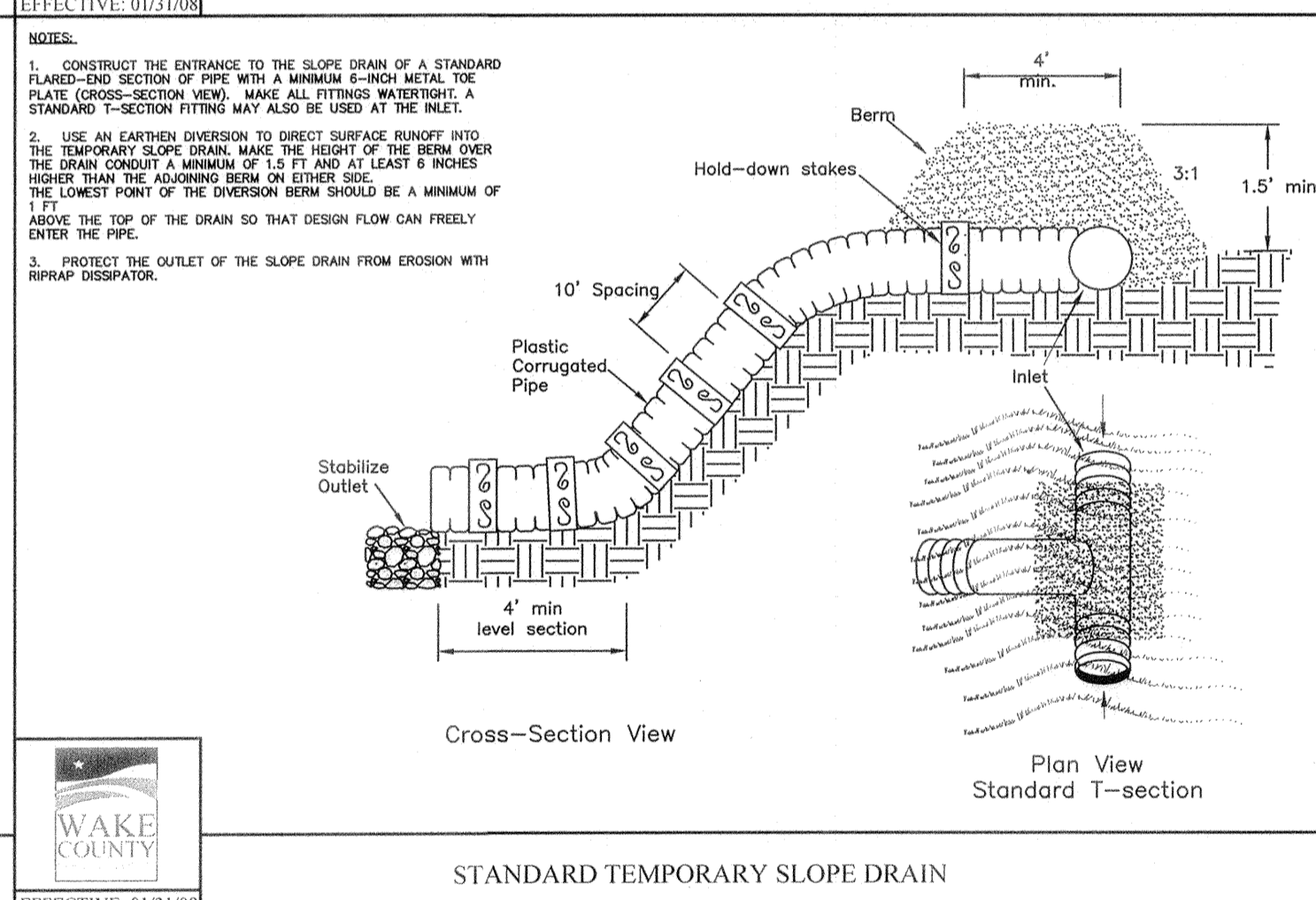
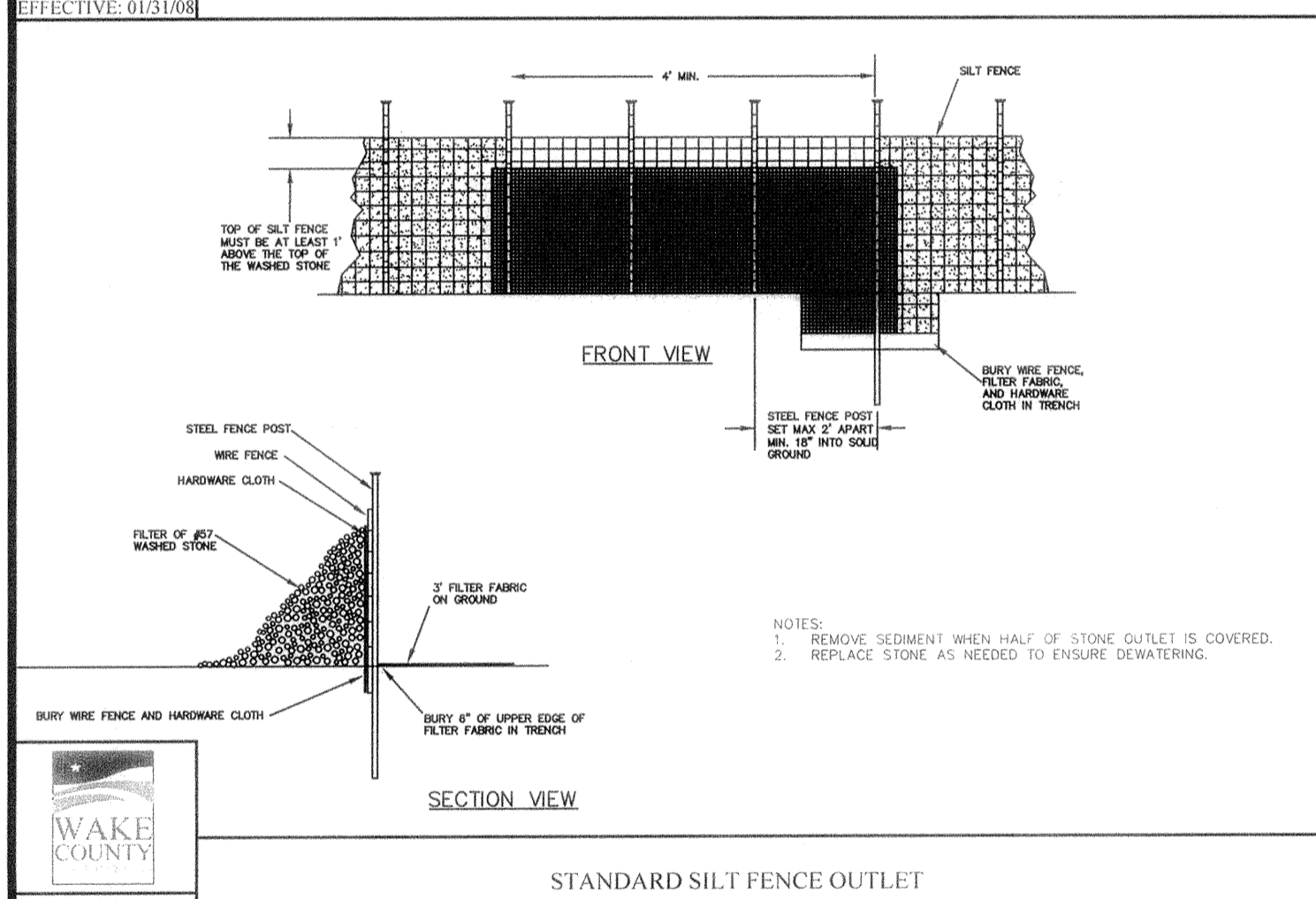
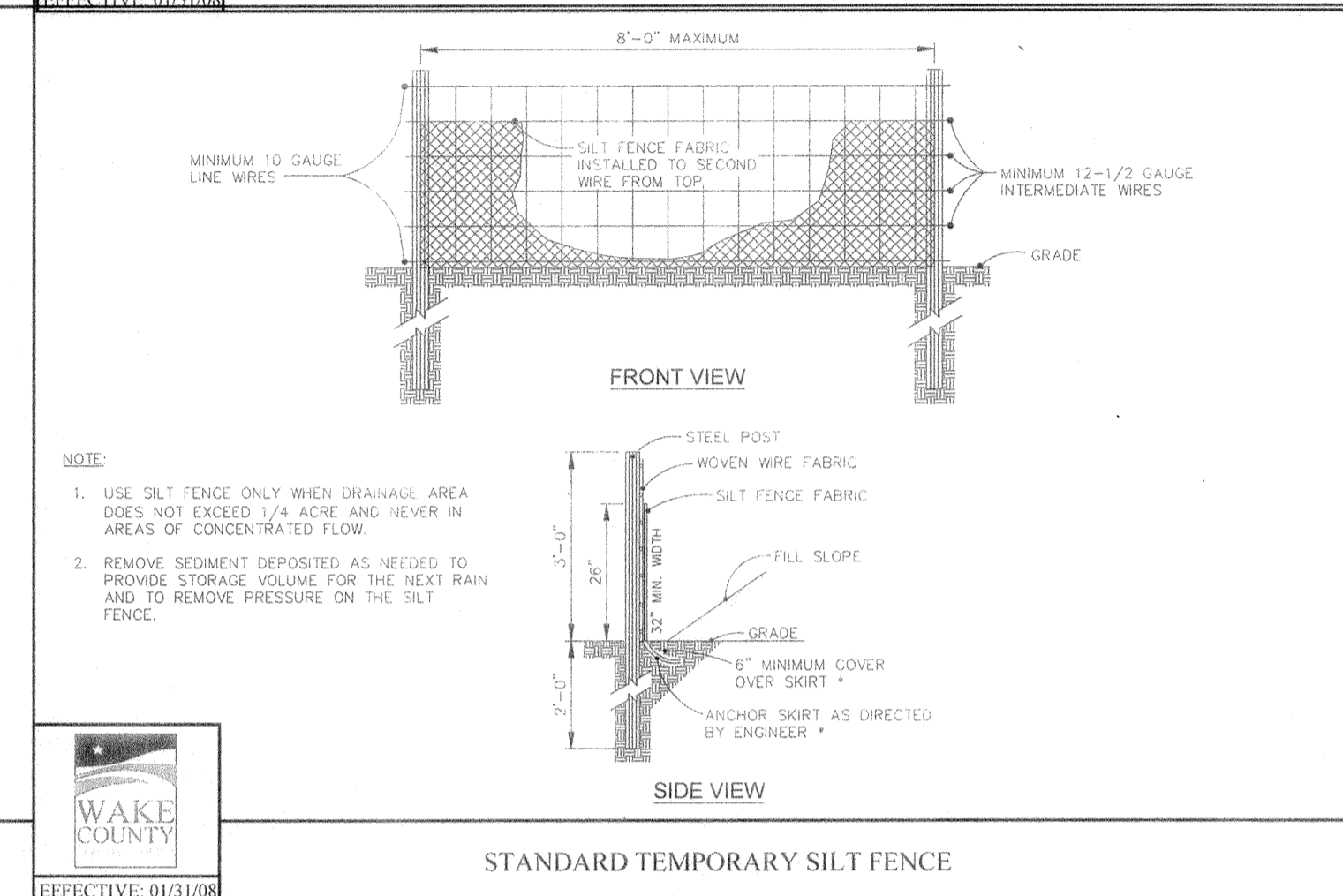
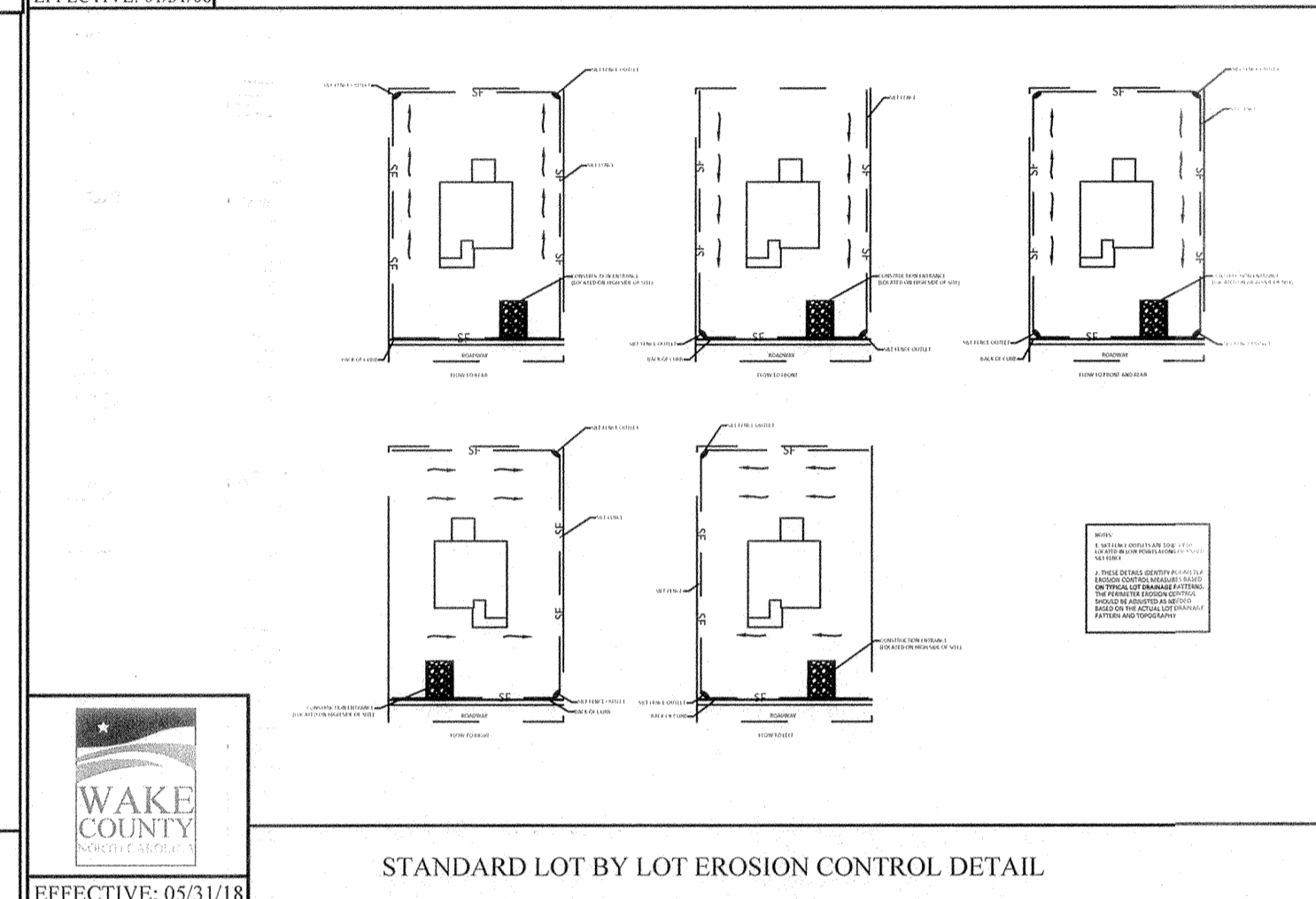
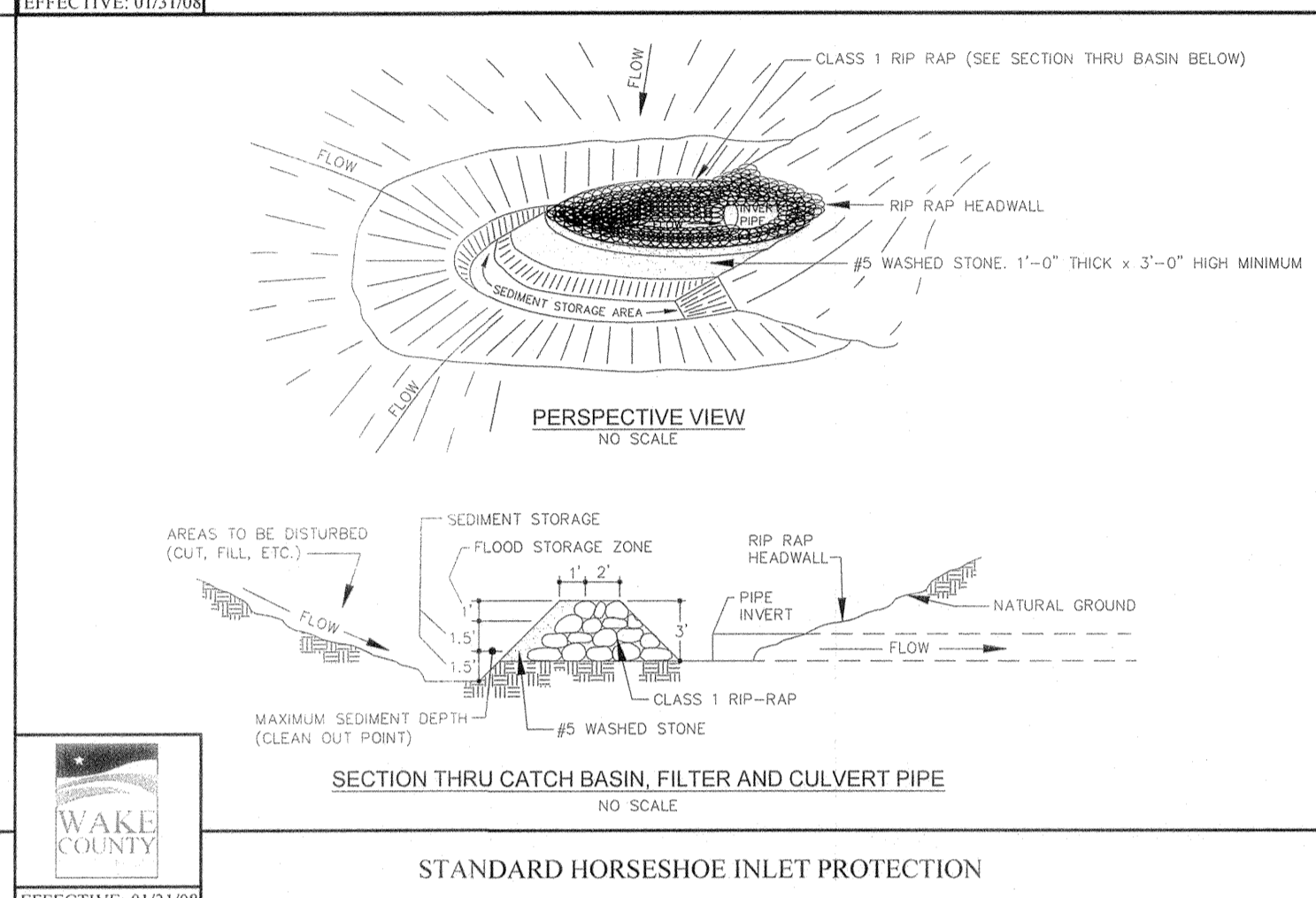
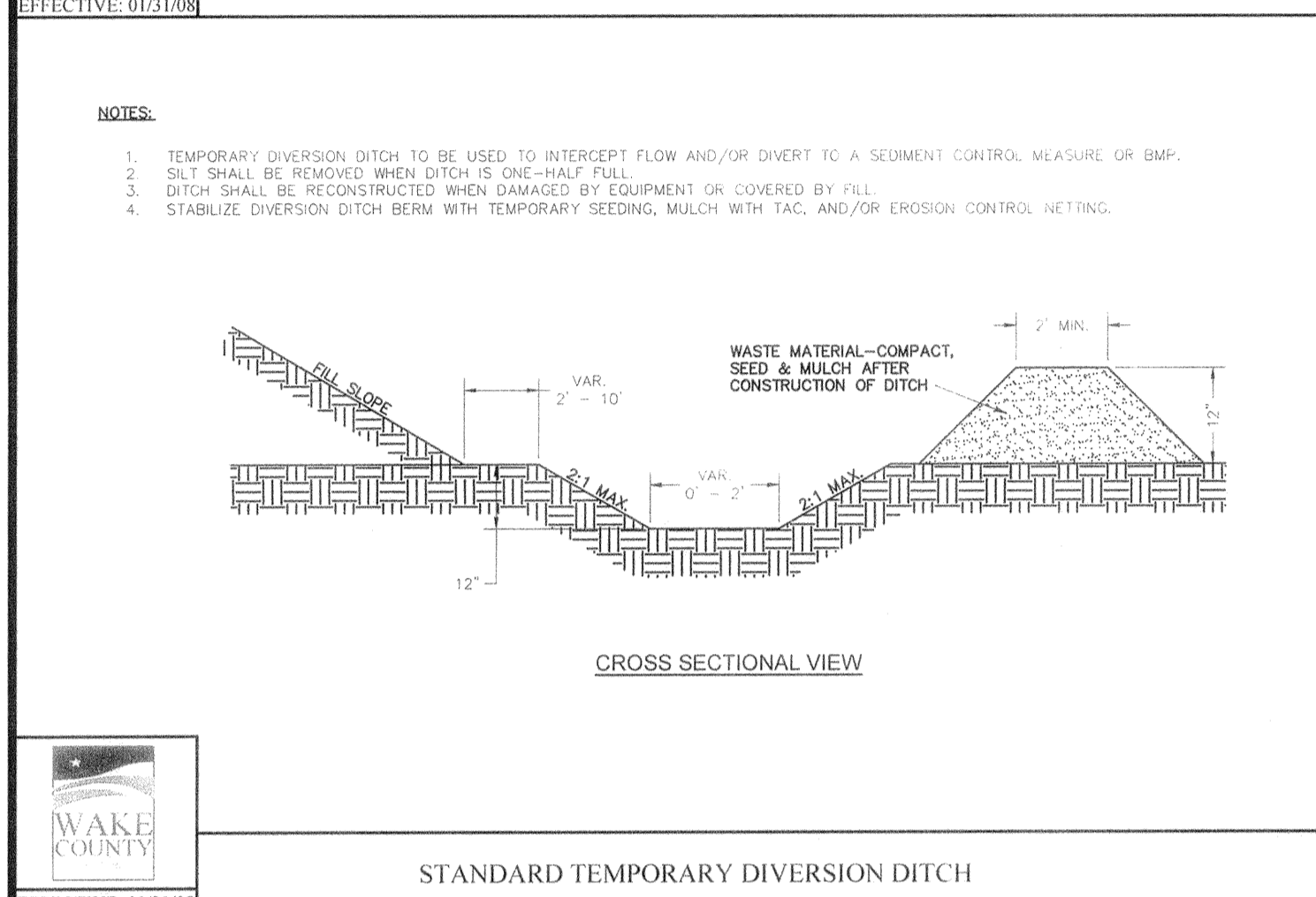
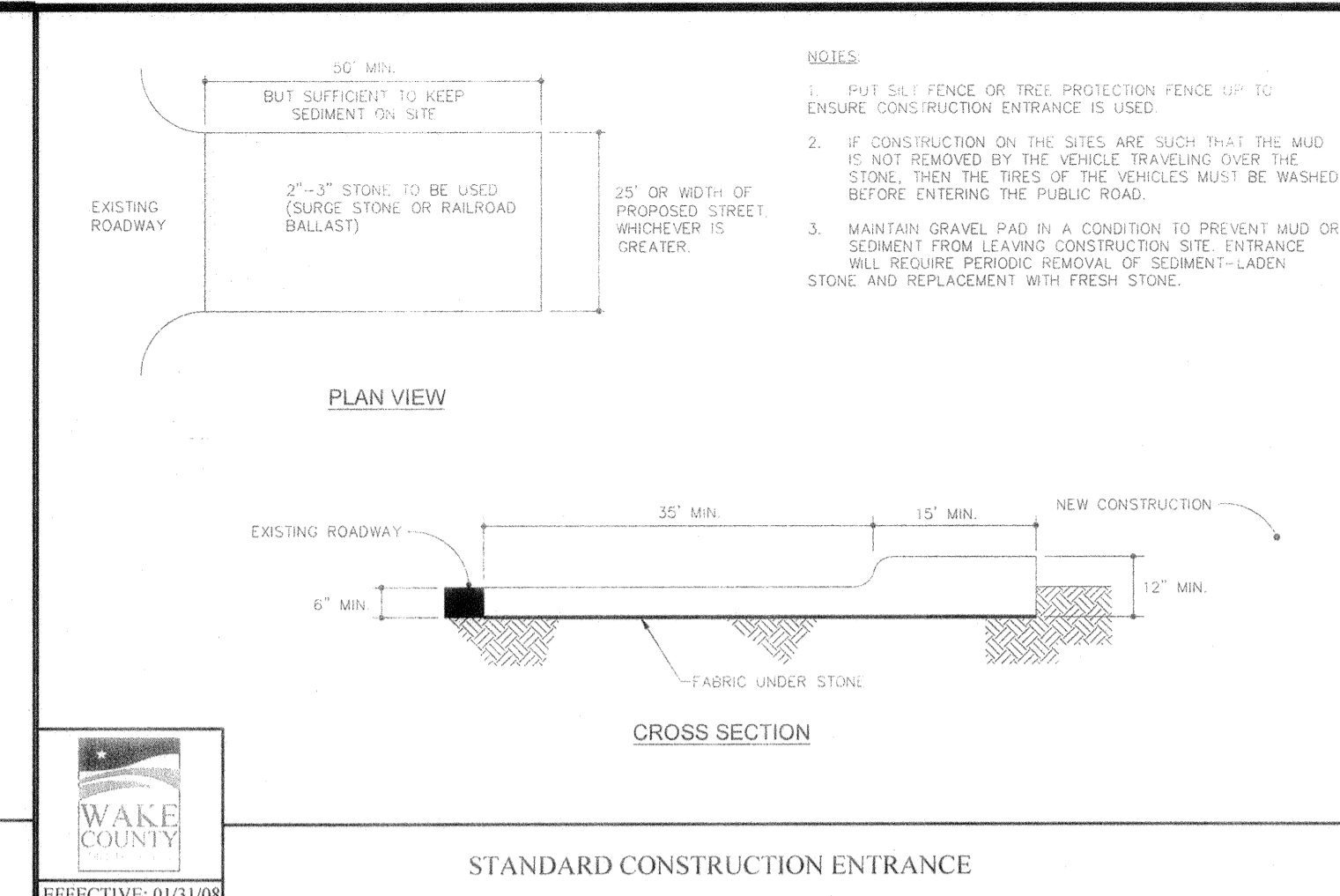
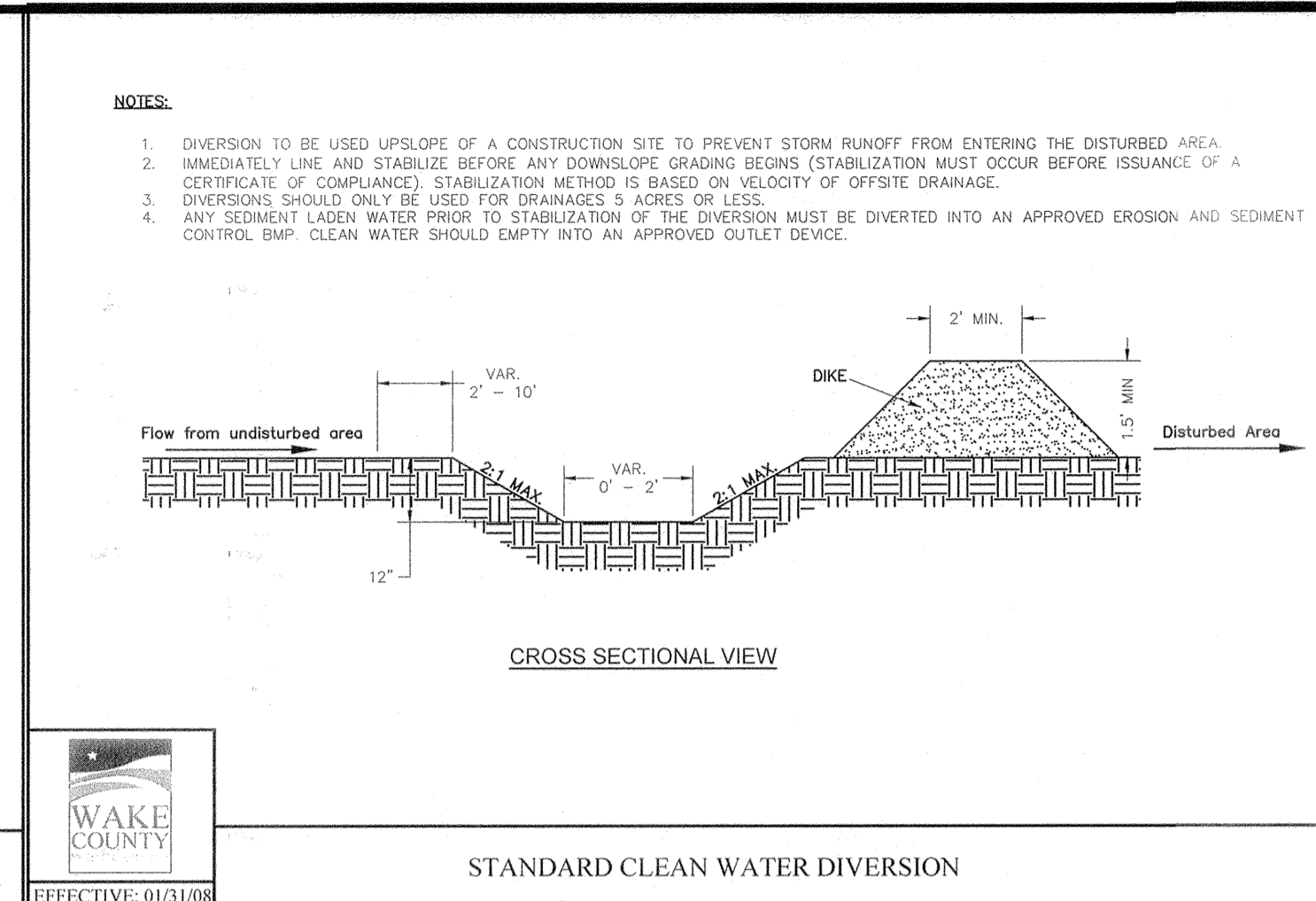
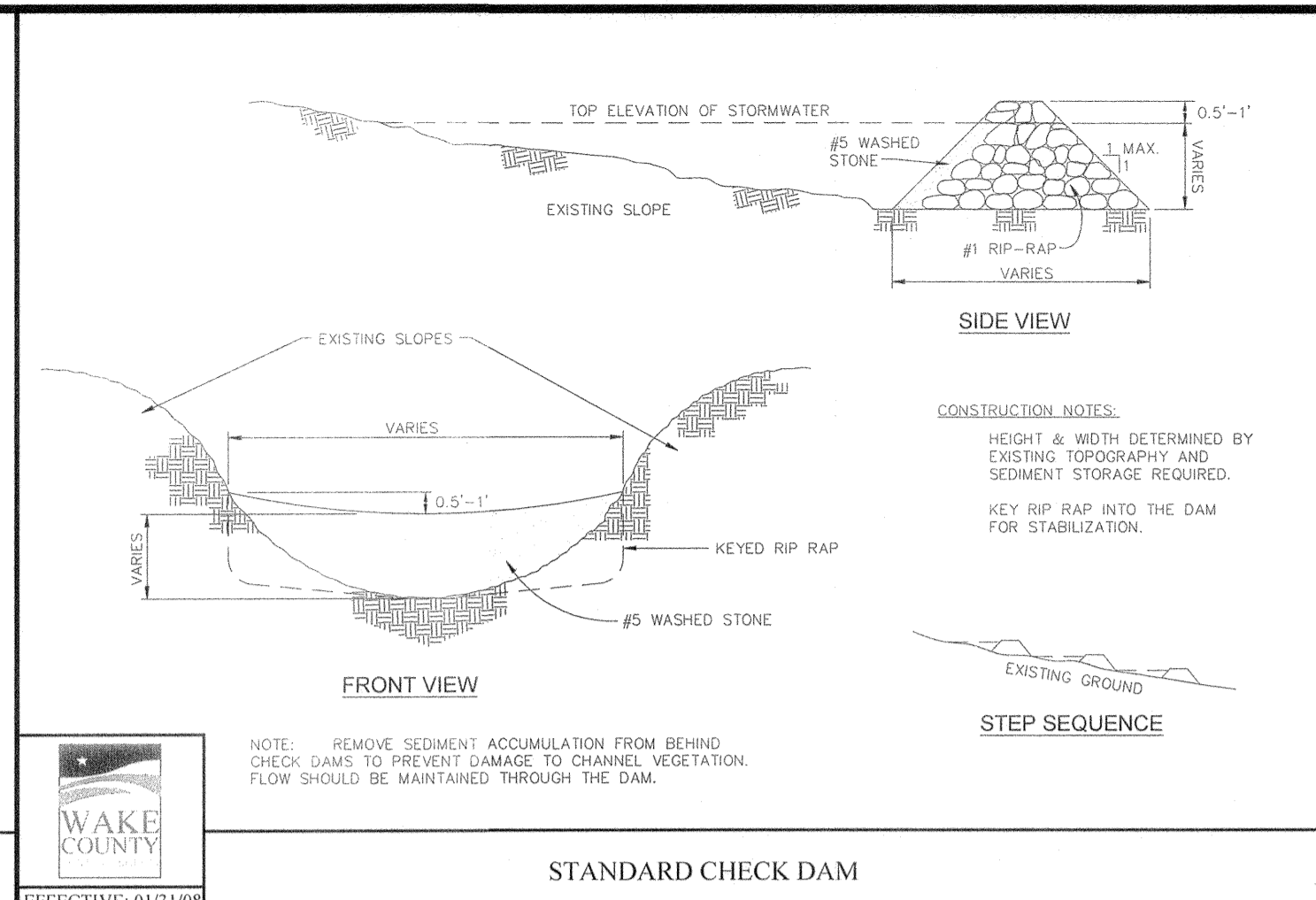
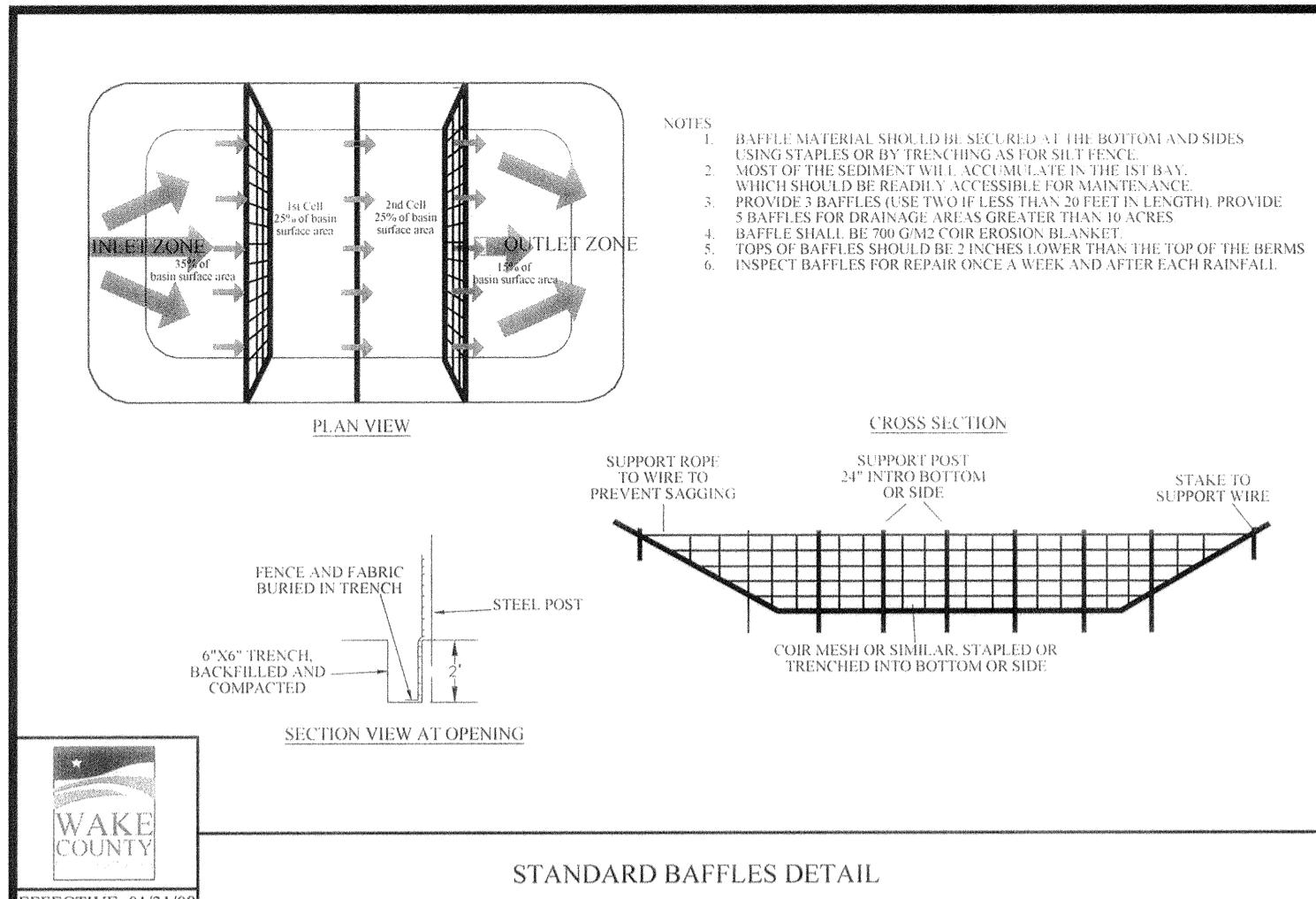
**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**NCDOT DETAILS**

Project Engineer: TSS  
 Designed By: RAJ  
 Drawn By: RAJ  
 Checked By: TSS  
 Scale: NTS  
 Date: 10/30/2018  
 Project Number: 170348  
 SHEET  
**C807**

PRELIMINARY  
 NOT RELEASED  
 FOR CONSTRUCTION  
 12/07/2018



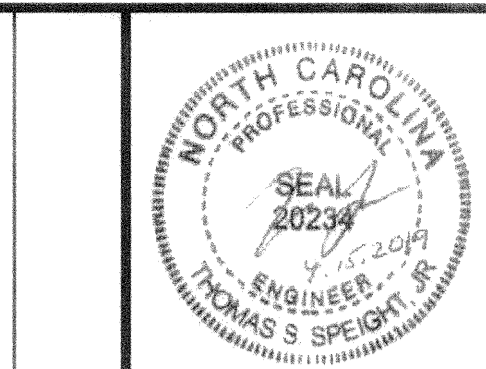


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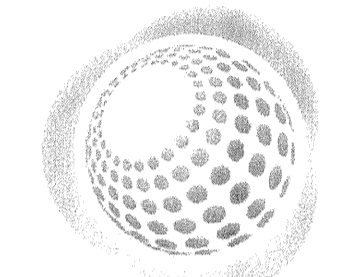
REV. NO.	DESCRIPTIONS	DATE
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**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27787  
 WAKE COUNTY, NC

**WAKE COUNTY**  
 EROSION CONTROL DETAILS

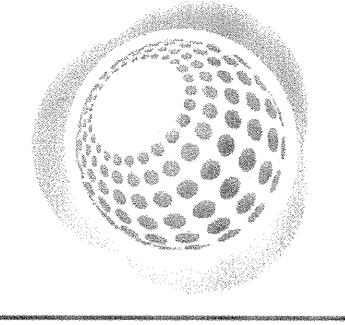
Project Engineer: TSS  
 Designed By: RAJ  
 Drawn By: RAJ  
 Checked By: TSS  
 Scale: NTS  
 Date: 10/30/2018  
 Project Number: 170348

**SHEET**  
**C808**

**PRELIMINARY**  
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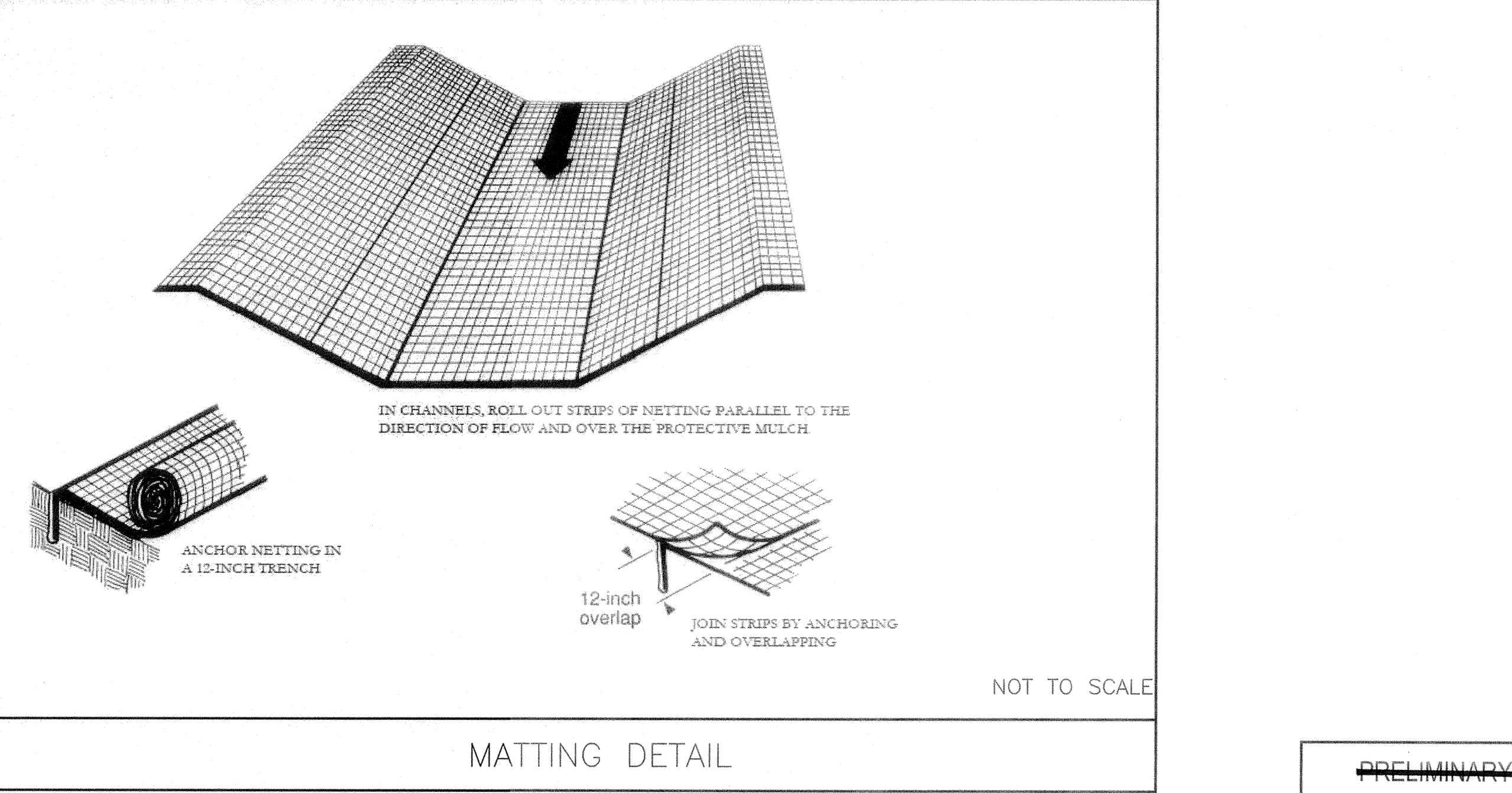
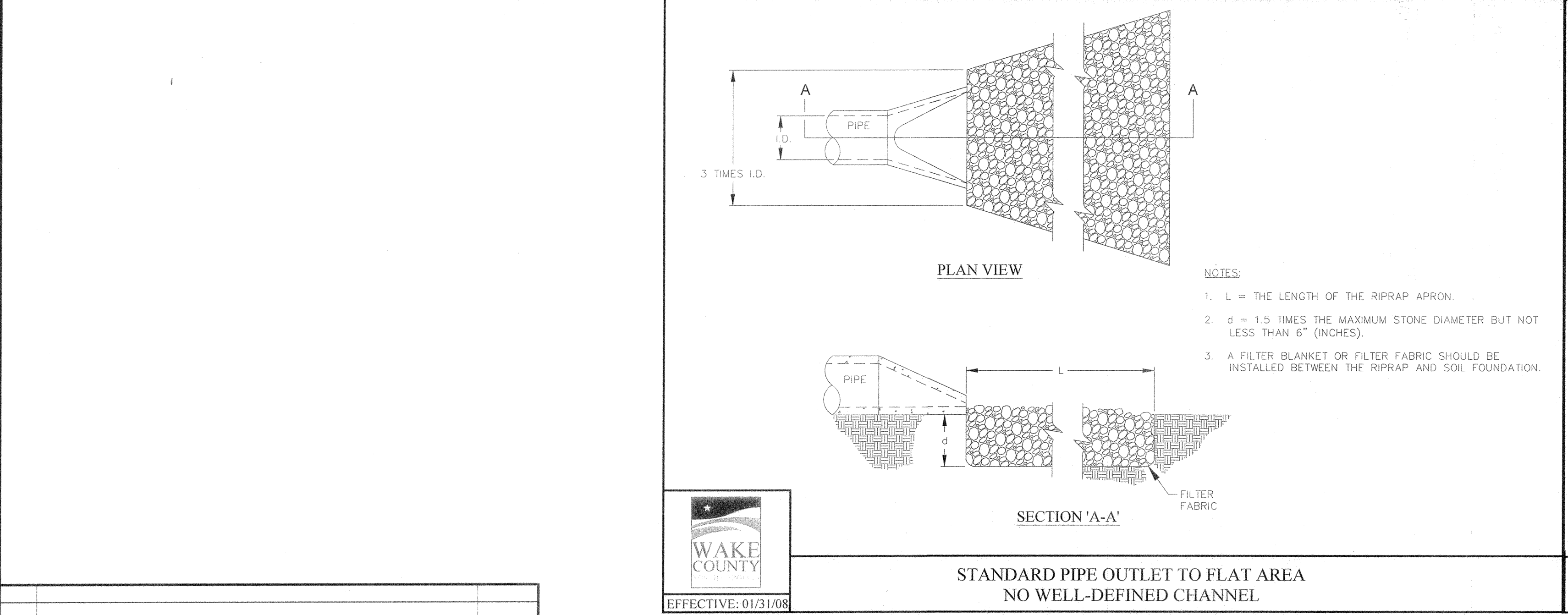
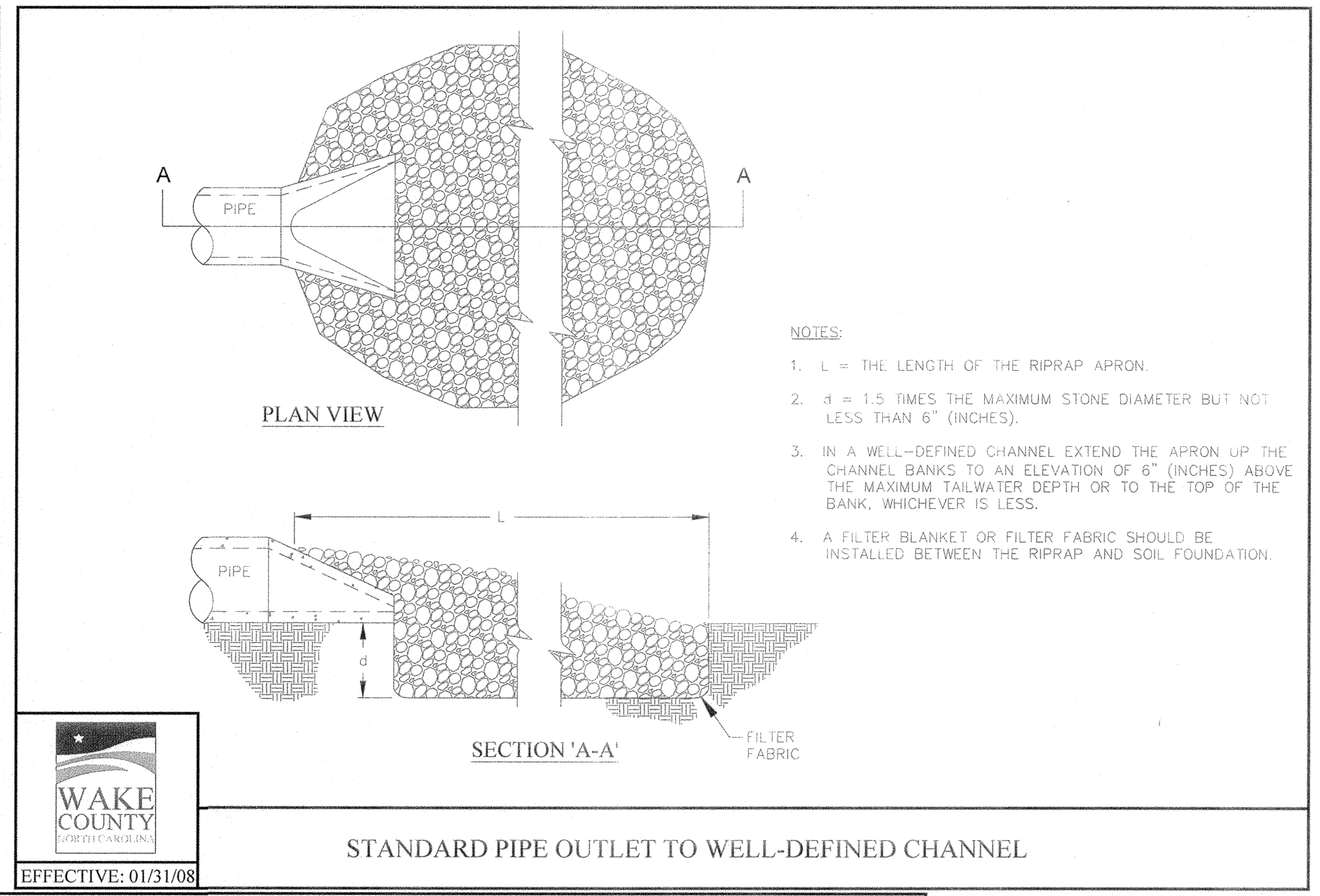
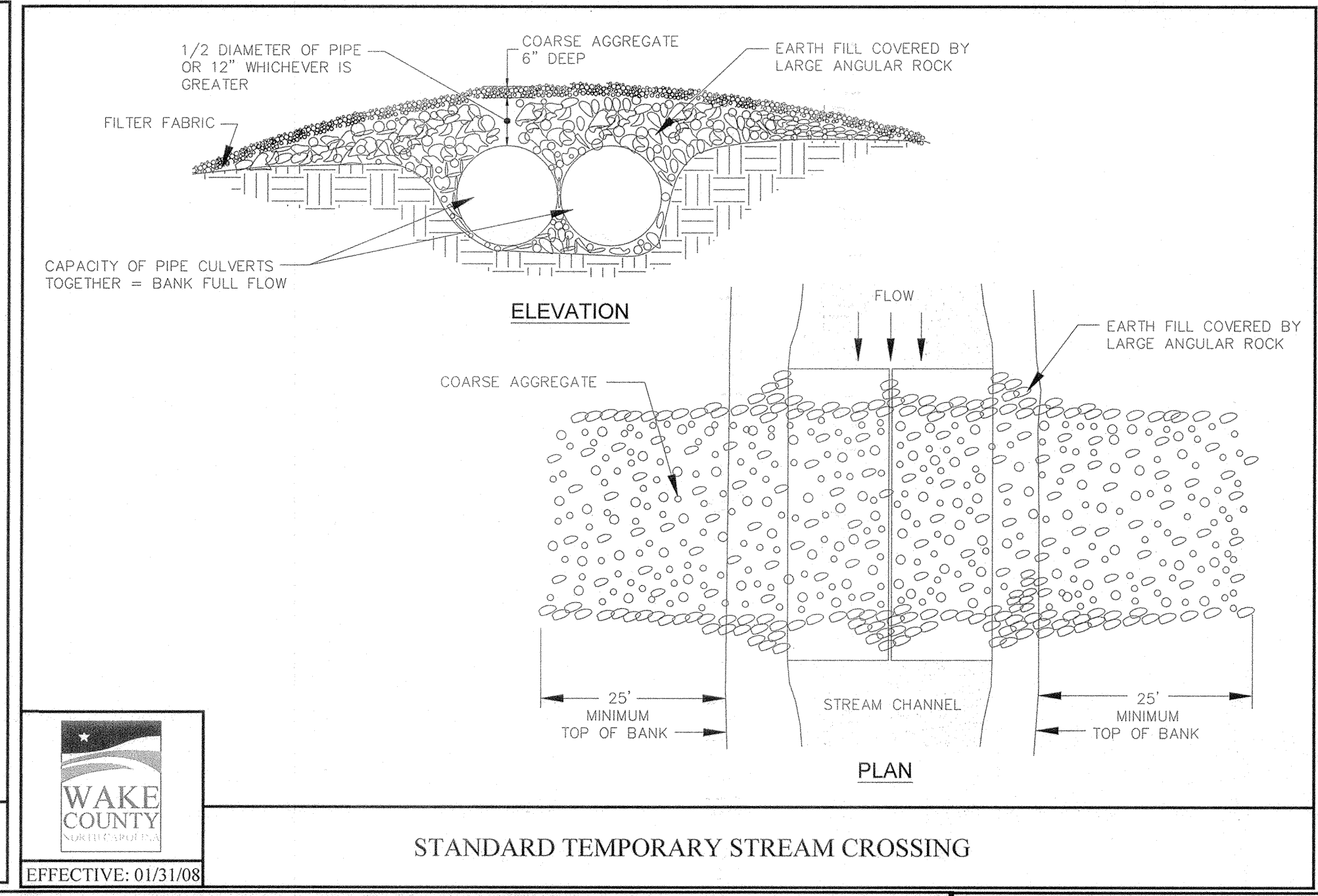
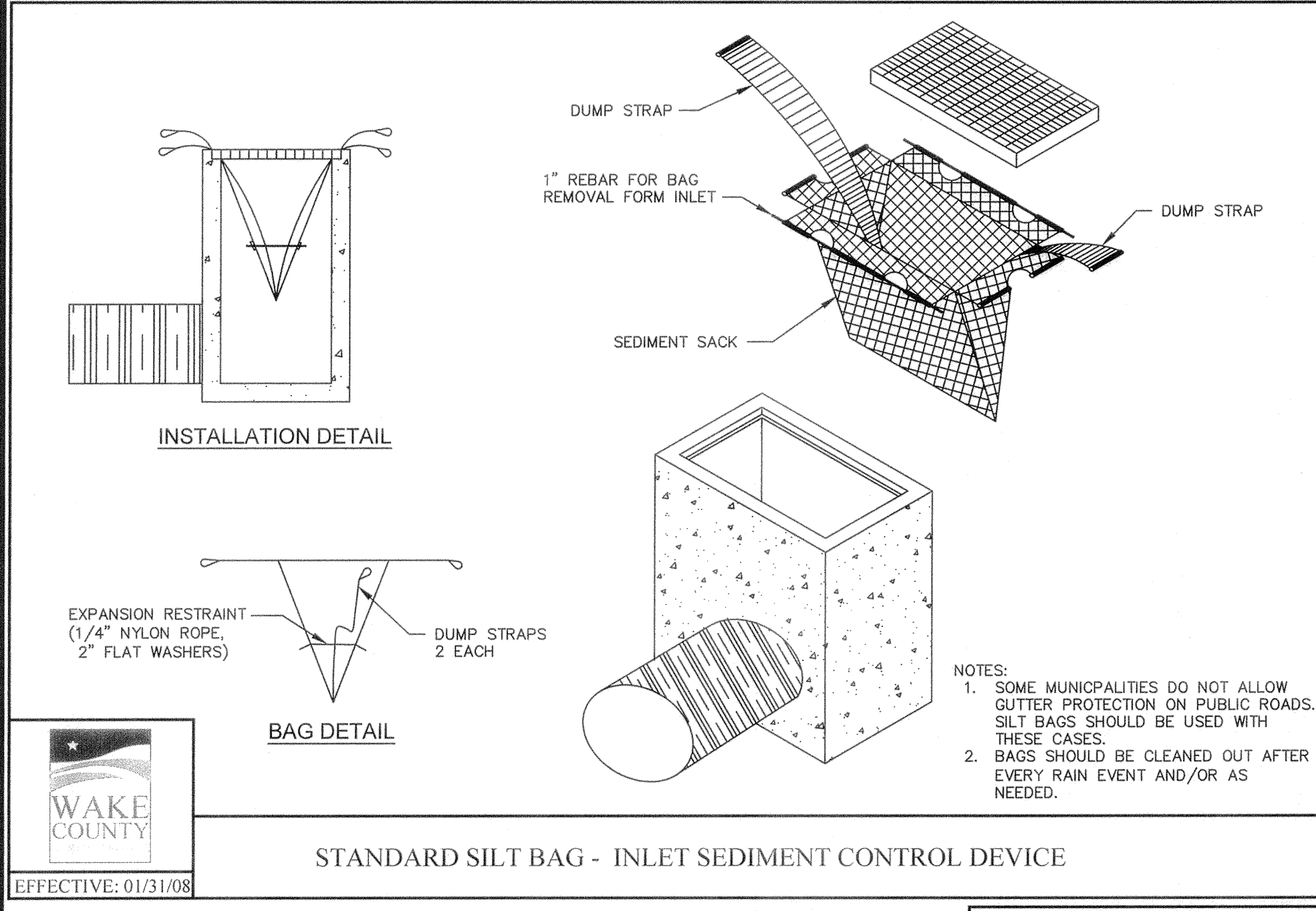
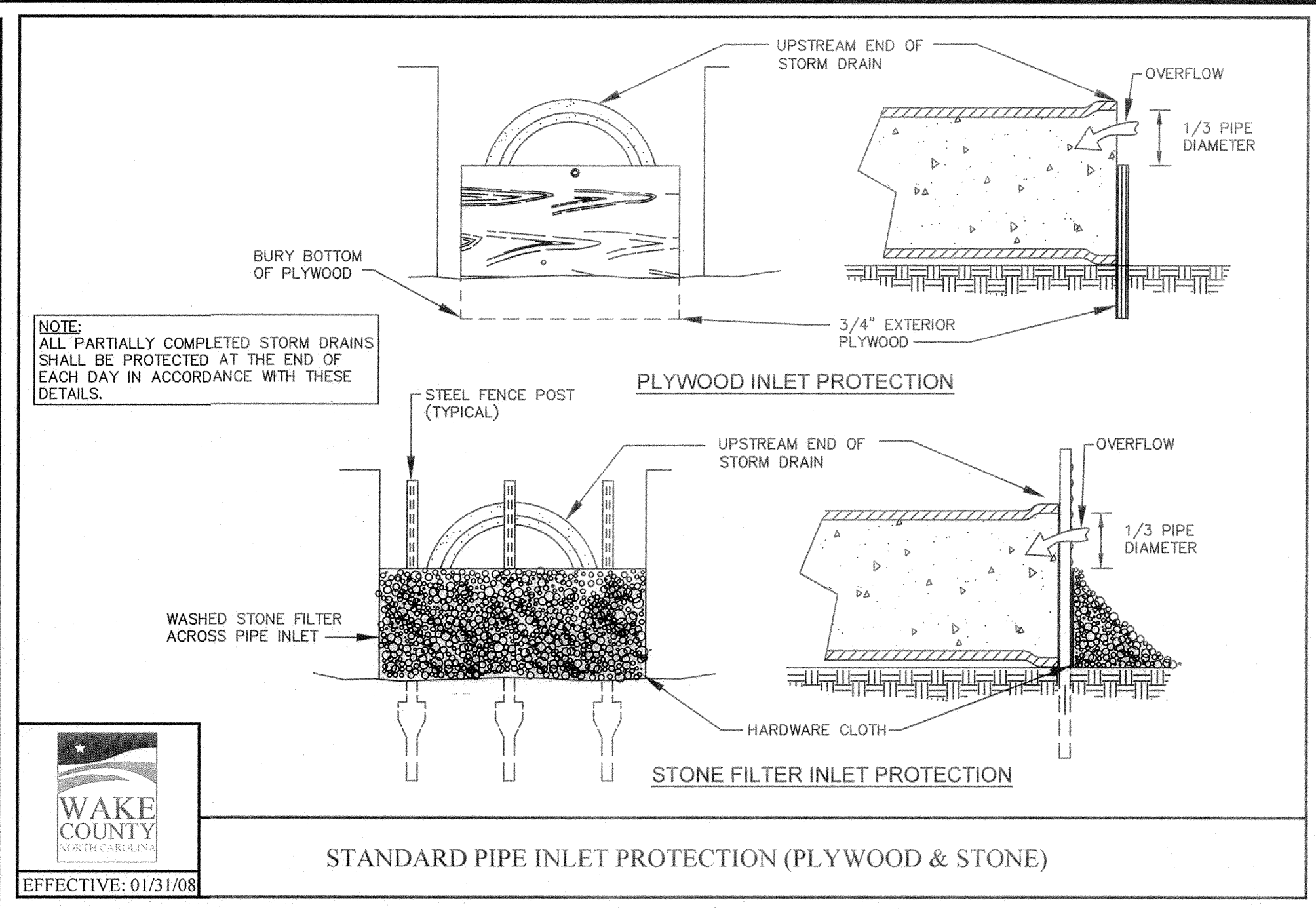
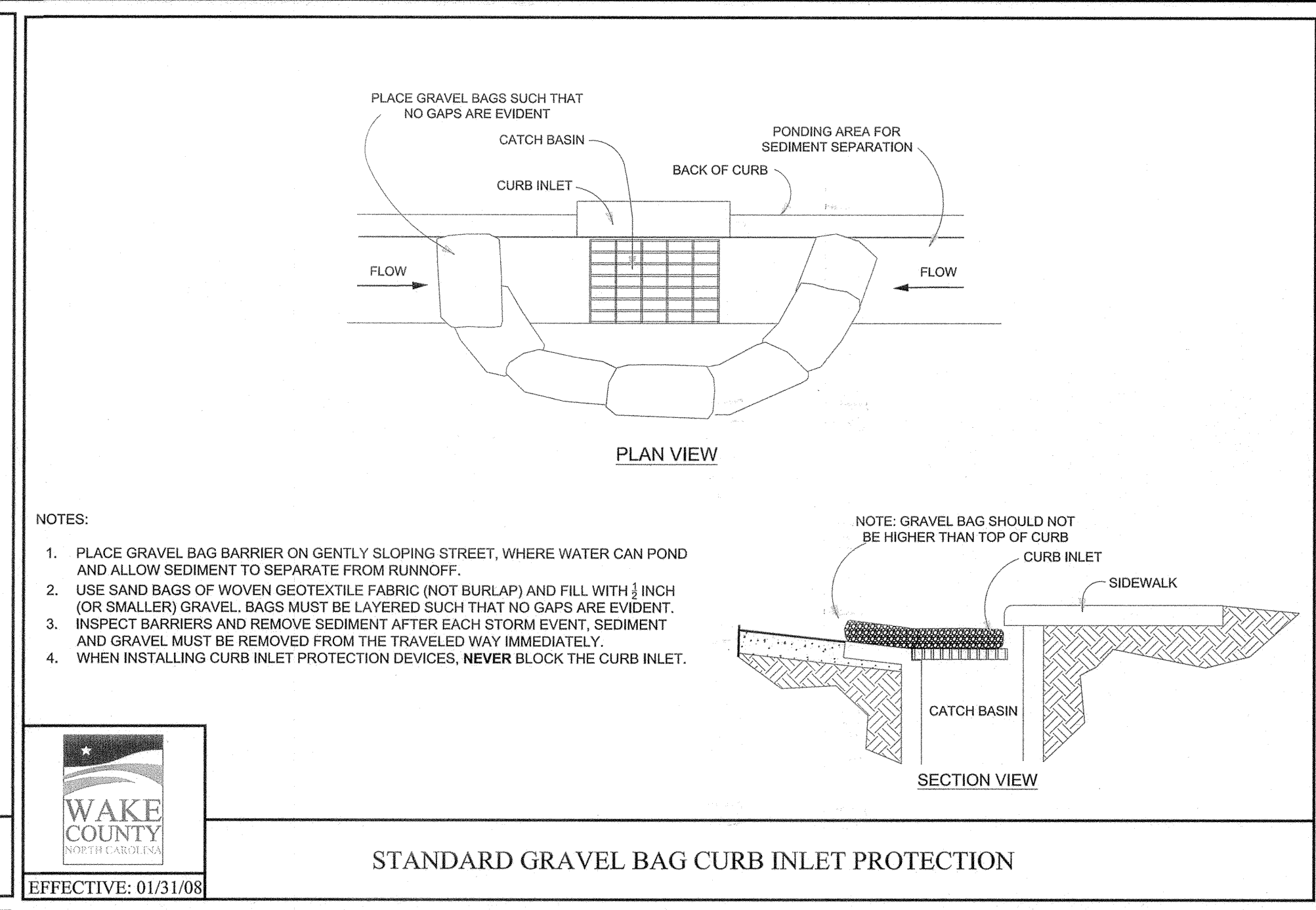
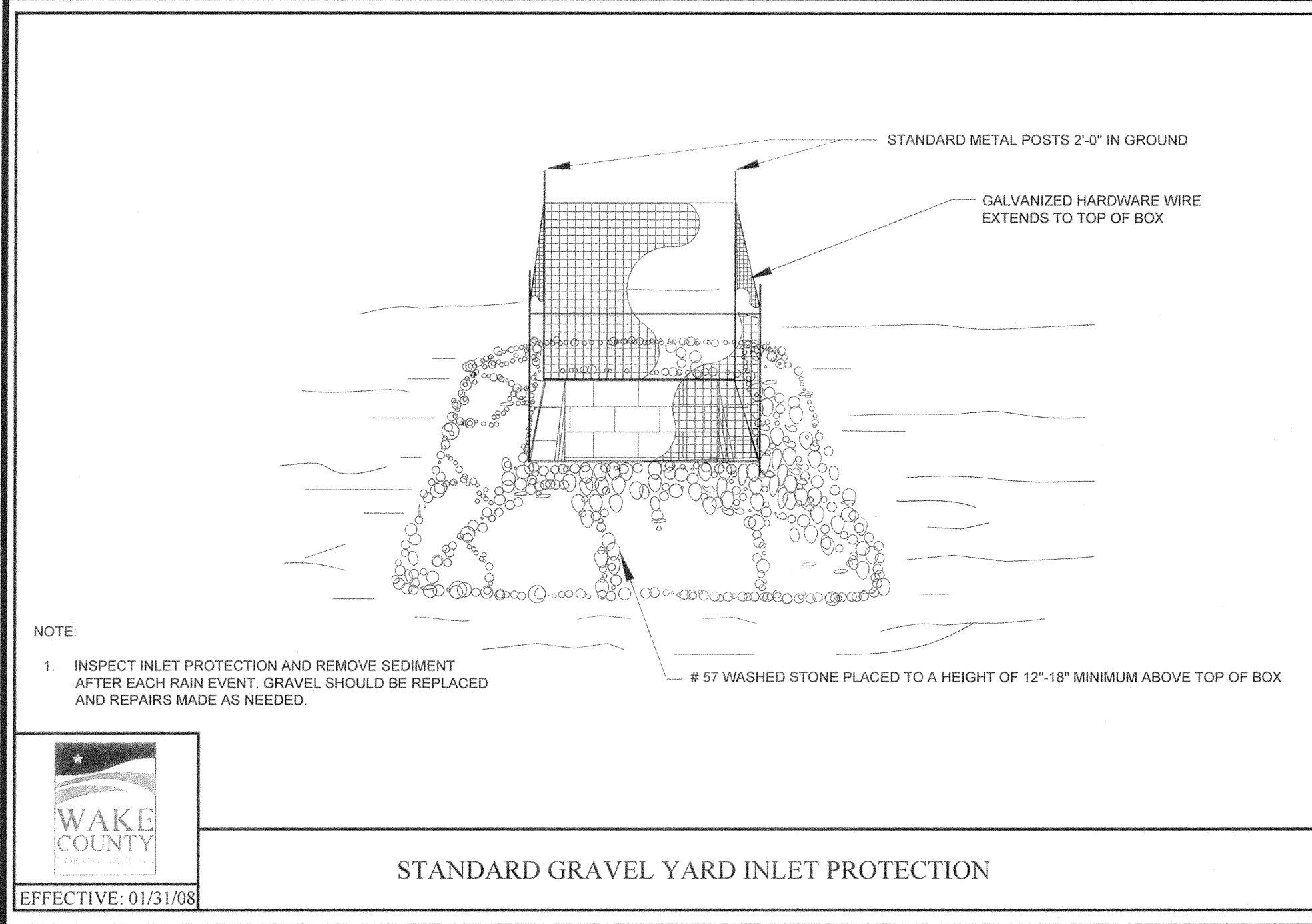
**ELIZABETH HEIGHTS**  
 CONSTRUCTION DRAWINGS  
 1205 AVERETTE ROAD  
 WAKE FOREST, NC 27587  
 WAKE COUNTY, NC

**WAKE COUNTY**  
 EROSION CONTROL DETAILS

Project Engineer: TSS  
 Designed By: RAJ  
 Drawn By: RAJ  
 Checked By: TSS  
 Scale: NTS  
 Date: 10/30/2018  
 Project Number: 170348

SHEET  
**C809**

ELIZABETH HEIGHTS



REV. NO.	DESCRIPTIONS	DATE
1	REVISED PER TOR COMMENTS	12/07/2018
REVISIONS		

~~PRELIMINARY~~  
~~NOT RELEASED~~  
~~FOR CONSTRUCTION~~  
 10/07/2018

