

PROJECT REPORT

| | |
|--------------------|------------------------------------------------------------------|
| DATE: | April 22, 2025 |
| NAME | Bristol Ponds Channel / Patty Pitcock |
| ADDRESS / LOCATION | North of Washington St. West of Elm Pl. (West of 1730 S Elm Pl.) |
| WATERSHED | Haikey Creek |
| ESTIMATE | \$230,000 |
| CASE NO. | 25-006 |

DESCRIPTION

Bristol Ponds is located North of Washington St. and West of Elm Pl. Bristol Ponds subdivision was platted and designed in 2005 and is the most recent development in its respective drainage area. Bristol Ponds is a private, gated subdivision.

The Bristol Ponds south detention area was designed to act as a conveyance area, provide additional storage for offsite stormwater runoff, and to serve as a private amenity to the Bristol Ponds subdivision. Reserve H, which contains the detention pond, is privately owned and maintained by the Bristol Ponds HOA.

The channel flows between Bristol Ponds and Village Park subdivisions and conveys offsite runoff through the Bristol Ponds detention area as designed. Per original design plans, the flow is 345 CFS with velocities that vary from 4-15 FPS (erosive) and are conveyed through the channel towards the detention area prior to the Bristol Ponds development. Actual flows range from 363-403 CFS. The concrete lined channel does not extend to the pond as designed and energy dissipators were not constructed per plan. Current conditions of the channel and pond appear to be in part, a result of erosive velocities of stormwater flows.

Neither offsite development nor actions by the City have been linked to the current concerns of the applicant. However, the channel flowing into Bristol Ponds detention area is now owned by the City of Broken Arrow. The City owns the channel between Bristol Ponds and Elm Place. The City owns property adjacent to Reserve H. The pond, its structures, and utilities are privately owned by the Bristol Ponds POA.

The project is currently in design and at approximately 60% complete. Project number is SW25080.

Construction is anticipated to occur summer 2025.

Staff is requesting \$230,000.00 in construction funds.

Case No. 25-006

BENEFIT

Erosion mitigation to ensure that the drainage system is functioning as designed with respect to volume capacity and velocity.

RECOMMENDATION

Staff recommends approval of \$230,000.00 in funds to construct erosion mitigation in the Bristol Ponds south detention pond and in the channel between Elm Pl. and Bristol Ponds south detention area.

COMPLETED BY: **Sarah Walters**

DATE: **04/22/2025**


City of Broken Arrow

Drainage Advisory Committee



APPLICATION

| | |
|--------------------------------------------|-------------------------------------------------------------------------|
| DATE: | October 22, 2024 |
| OWNER NAME: | Bristol Ponds/City of Broken Arrow |
| PHONE NUMBER: | 918-808-3290 |
| EMAIL ADDRESS: | pattijpit@hotmail.com |
| OWNER MAILING ADDRESS: | 905 W Urbana St BA, Ok 74012 |
| ADDRESS OF PROPERTY WITH DRAINAGE PROBLEM: | Bristol Ponds south pond to the side of Arvest Bank running east tp Elm |
| LOCATION OF DRAINAGE ISSUE ON PROPERTY: | see above |

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| DESCRIPTION OF PROBLEM: | (*PHOTOS SHOULD ACCOMPANY APPLICATION) |
| <p>Per communication with Mr. Wilson, we, as a homeowners group, were urged to complete this form for consideration of assistance since the city is involved and met with us previously. Per his last email, in October, "the city has reviewed existing plans for the concrete channel and Bristol Ponds subdivision. The plans for the channel DO SHOW velocities leaving Elm Place to be erosive. There is riprap included to slow the velocities down. Also, plans for Bristol Ponds showed more energy dissipators at the end of the channel. From aerial photos, it appears these dissipators were not ever constructed. Mr. Wilson recommended that we, as homeowners, complete this form.</p> <p>The south bank of our pond, has rapidly deteriorated due to this absence of dissipators. We realize natural erosion will occur over time, but within this last year, it has deteriorated more than the 5 years beforehand combined. We are hoping for some options to limit/lessen our concerns. Part of the land on the south bank belongs to the city per what we have been told.</p> <p>Charles and Patti Pitcock</p> <p>Signature:  October 22, 2024</p> | |

RETURN TO STORMWATER DIVISION MANAGER'S OFFICE, PO BOX 610 Broken Arrow, OK 74013

Aerial Map

IMPROVEMENTS NOT CONSTRUCTED PER
BRISTOL PONDS DEVELOPMENT PLANS

S. ELM PLACE

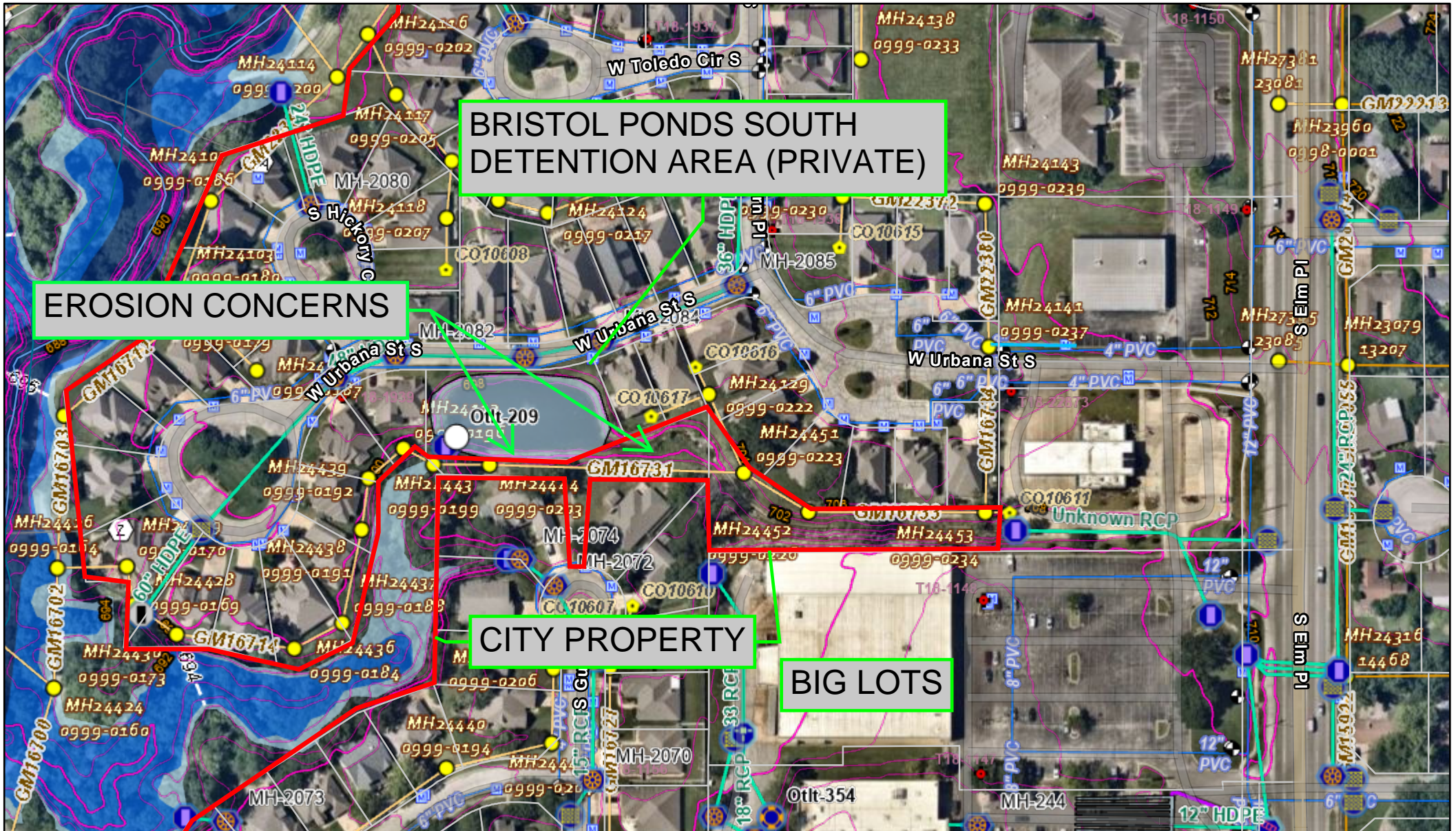
E. 91st St.

Google Earth



























1000 ft

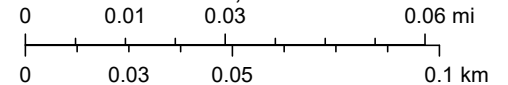
Utility Map



10/14/2024, 9:39:07 AM

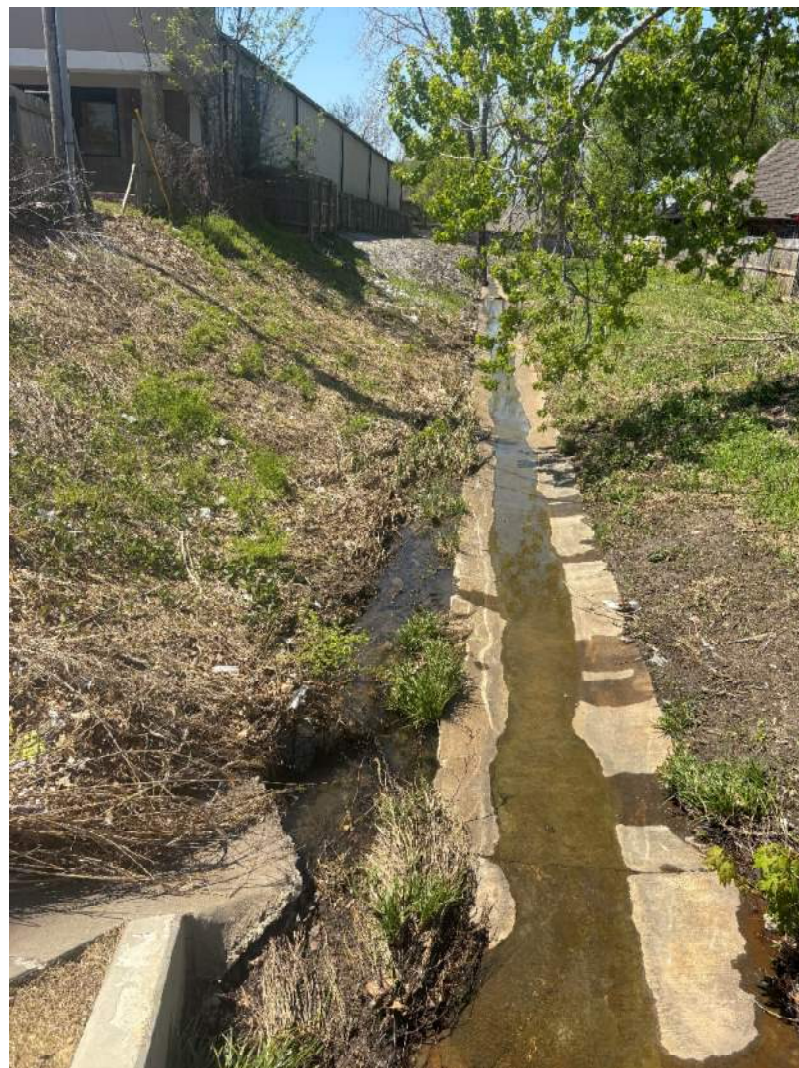
-  Parcels
  BMP Boundary
  Pipe
  Wall
  Fitting
 
-  Blue Line Streams (ODOT)
  Linear Drain
  Gravity
  Unknown
  Wye
  Junction Box
-  FEMA Streams
  Slotted Drain
  Catch Basin
  Headwall
  Outlet
  Manhole
-  Address Points
  Open Channel
  Drop Inlet
  Pipe Outlet
  Manhole
-  Spillway Channel

1:2,257



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© OpenStreetMap contributors, and the GIS User Community, City of Tulsa, US
Census Bureau, INCOG, & unknown, City of Broken Arrow Geospatial Services
Division

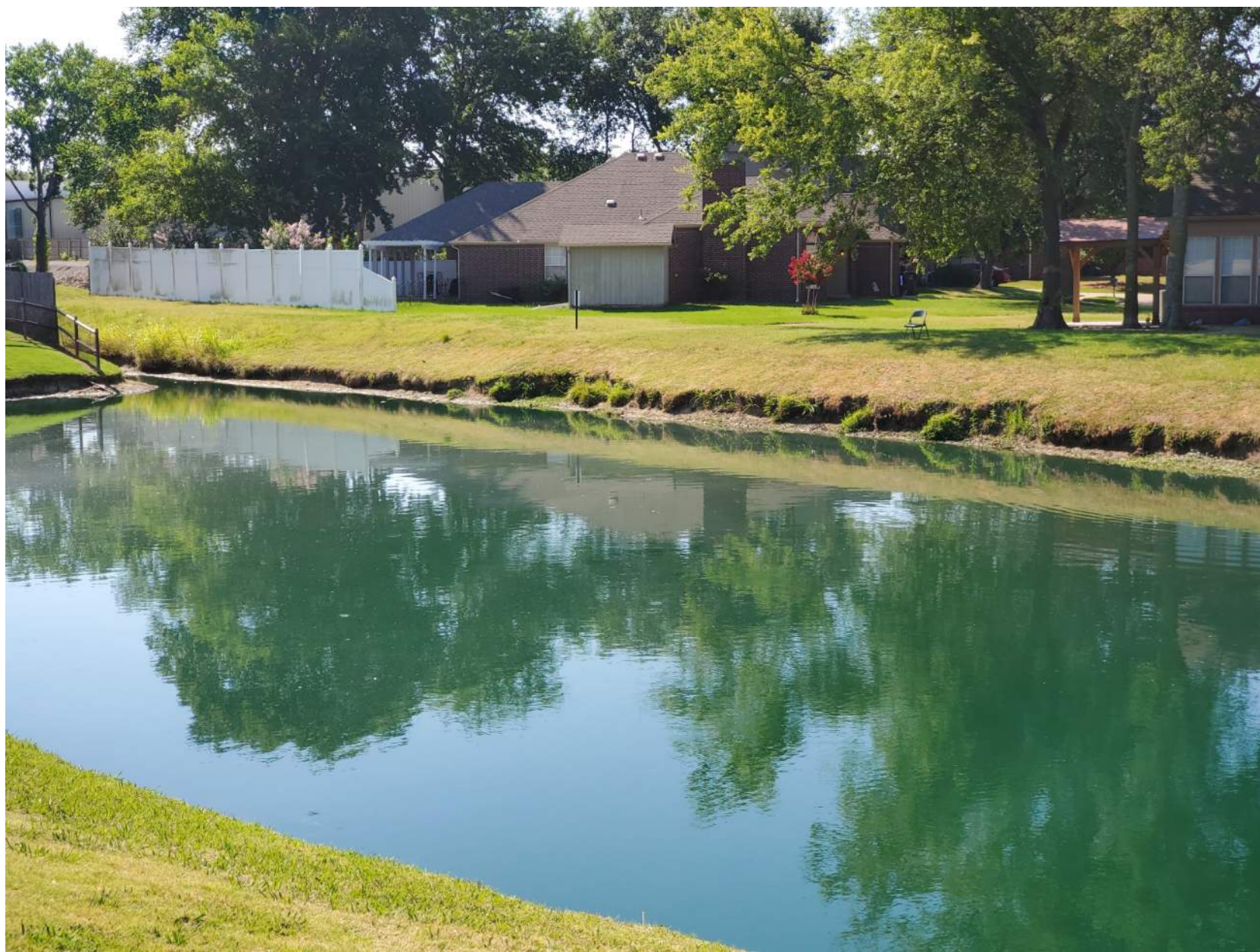
City of Broken Arrow







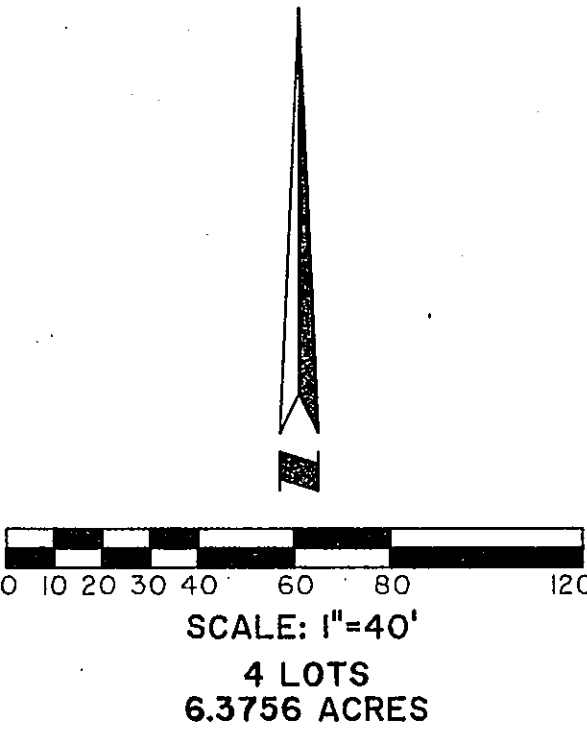
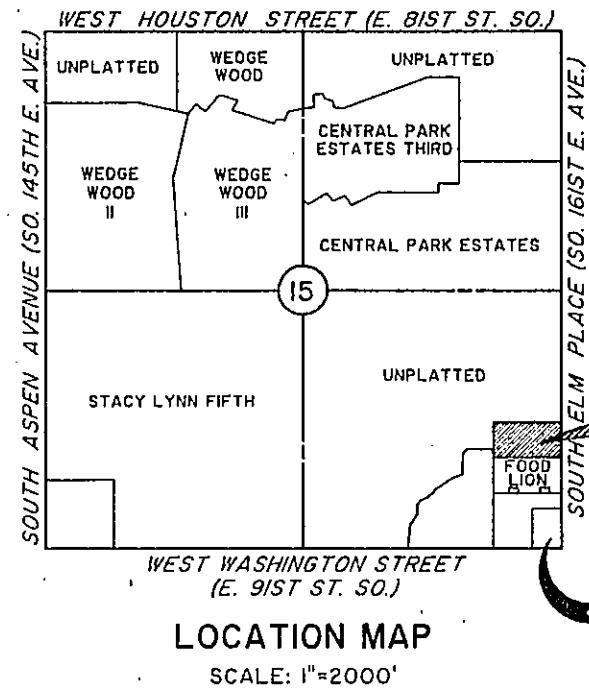






METROLAND COMMERCIAL CENTER

R 14 E



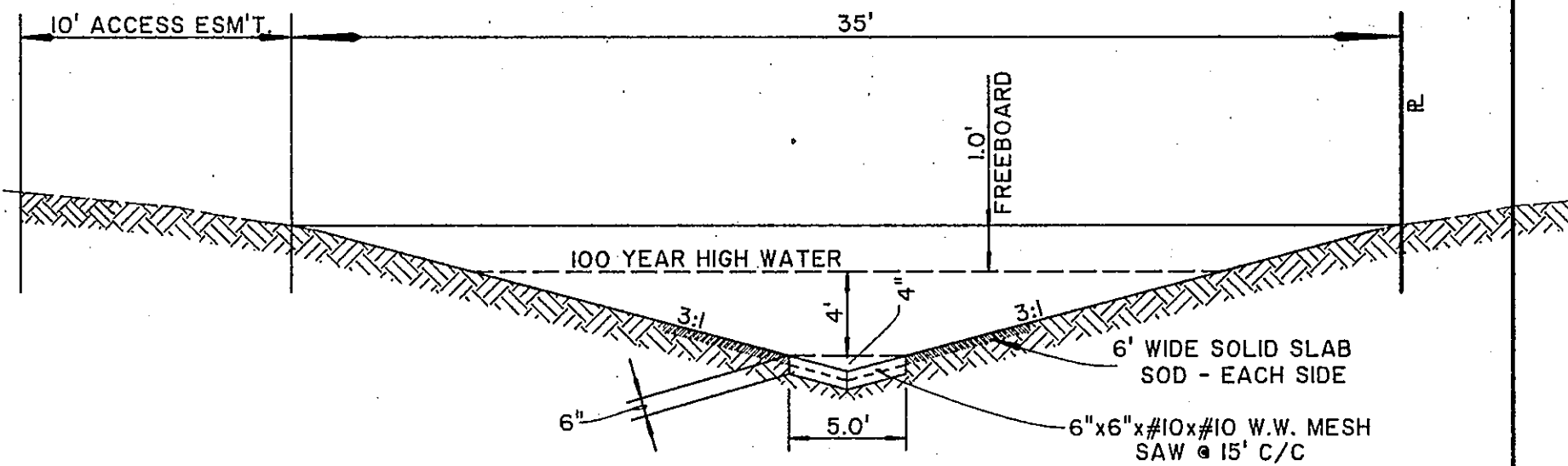
LEGEND
B.L. - DENOTES BUILDING LINE
U/E - DENOTES UTILITY EASEMENT
L.A. - DENOTES LIMITS OF ACCESS
L.N.A. - DENOTES LIMITS OF NO ACCESS
D/E - DENOTES DRAINAGE EASEMENT
P - DENOTES PAVING
T.C. - DENOTES TOP OF CURB
N.G. - DENOTES NATURAL GROUND
• - DENOTES SOIL BORING
R/W - DENOTES RIGHT-OF-WAY
--- DENOTES STRAW BALES
--- DENOTES SILT FENCE

OWNER:

METROLAND DEVELOPMENT
AN OKLAHOMA GENERAL PARTNERSHIP
9168 SOUTH FLORENCE PLACE
TULSA, OKLAHOMA 74137
TEL. (918) 481-8838

ENGINEERS:

COX & ASSOCIATES, INC.
7935 EAST 57TH STREET SOUTH
TULSA, OKLAHOMA 74145
TEL. (918) 664-3337



NOTE:
EXISTING 7'x4' R.C.B.
ON 0.80%
V = 13.2 F.P.S.
Q = 346 C.F.S.

**SECTION A-A
PAVED DITCH
CROSS SECTION**
SCALE 1" = 4' H. & V.

D.A. = 76.6 ACRES
Q100 = 363 C.F.S.
Q10 = 203 C.F.S.
FLOW DEPTH = 4.33 FT.
AREA = 69.64 SQ. FT.
WP = 30.30 FT.
SLOPE = 0.65%
N = 0.035
V = 5.96 F.P.S.
Q = 415 C.F.S.
QREQ = 363 C.F.S.

BENCH MARK: 5/8" REBAR - ALUM. CAP
STAMPED '106', 11.5' WEST OF ELM
PLACE & 75' NORTH OF TOLEDO PLACE
ELEVATION 715.97 U.S.G.S. DATUM.

0+07.00
D.G.D.I.
D.A. = 0.94 AC.

CITY OF BROKEN ARROW
ENGINEERING DEPARTMENT
No Exceptions Taken
No Corrections Noted
No Revisions
No Resubmit
CITY ENGINEER
DATE 09-21-93

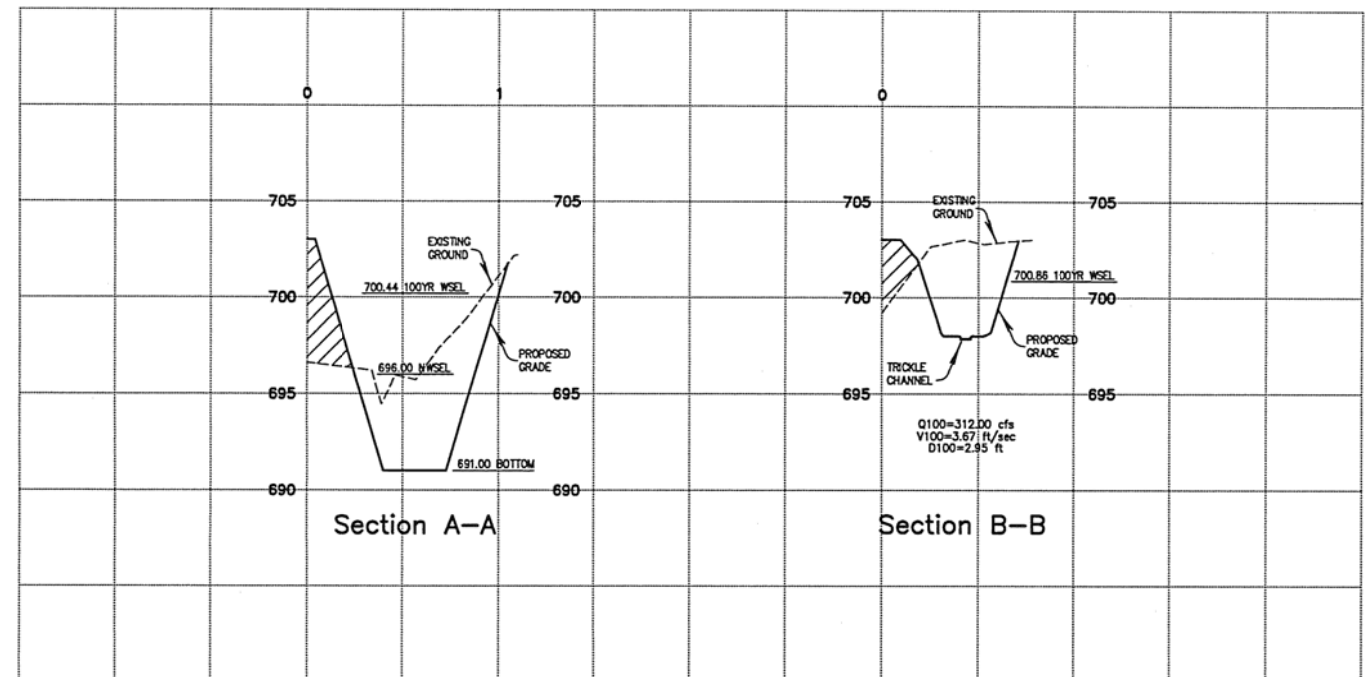
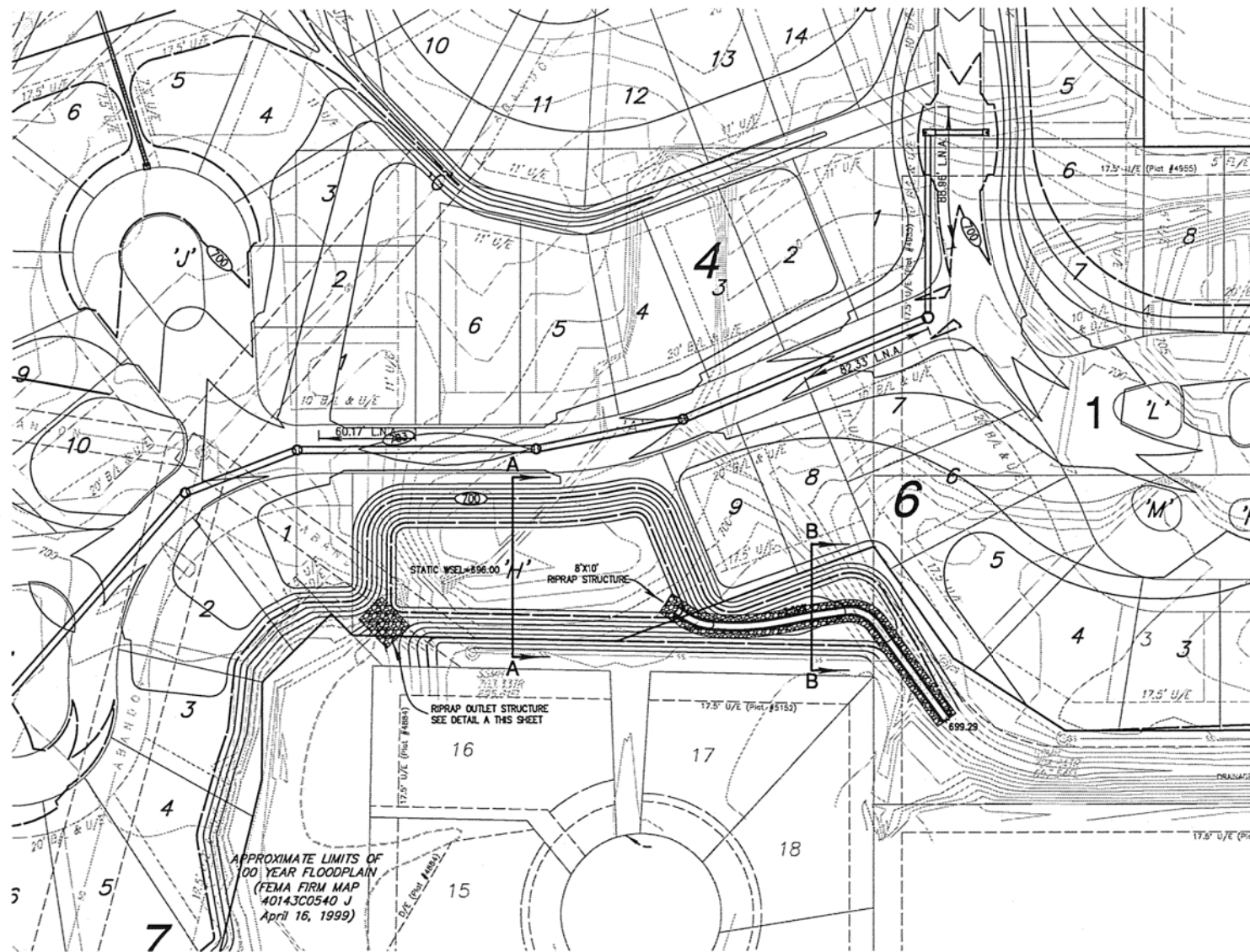
GRADING & DRAINAGE PLAN

**METROLAND COMMERCIAL CENTER
LOT 2, BLOCK 1**

CITY OF BROKEN ARROW, OKLAHOMA

PLANS & ESTIMATES PREPARED BY: 664-3337
COX & ASSOCIATES, INC. ENGINEERS
7935 East 57th Street South Tulsa, Oklahoma 74145

| REVISION | BY | DATE | PLAN SCALE: | DR. BY: | APPROVED: |
|----------|----|------|-------------|---------------------|-----------|
| | | | 1" = 40' | CK. BY: | |
| | | | | APP. BY: | |
| | | | | DATE: | |
| | | | | SEQ. NO. | |
| | | | | RECOMMENDED: | |
| | | | | CITY ENGINEER | |
| | | | | DATE: | |
| | | | | ATLAS PAGE NO. | |
| | | | | SHEET 1 OF 6 SHEETS | |

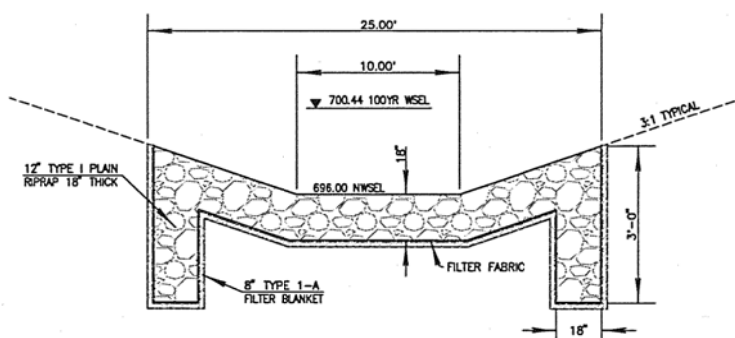


DETENTION DATA SUMMARY

| RETURN PERIOD | 5 YEAR | 10 YEAR | 25 YEAR | 50 YEAR | 100 YEAR | 500 YEAR |
|----------------------------|--------|---------|---------|---------|----------|----------|
| DETENTION VOLUME (acre-ft) | 1.34 | 1.56 | 1.77 | 1.95 | 2.12 | 2.52 |
| PEAK INFLOW (cfs) | 149.5 | 194.8 | 238.5 | 275.7 | 311.9 | 395.6 |
| PEAK OUTFLOW (cfs) | 147.8 | 192.7 | 236.1 | 273.0 | 308.7 | 391.8 |
| PEAK ELEVATION (ft) | 698.71 | 699.24 | 699.71 | 700.09 | 700.44 | 701.20 |

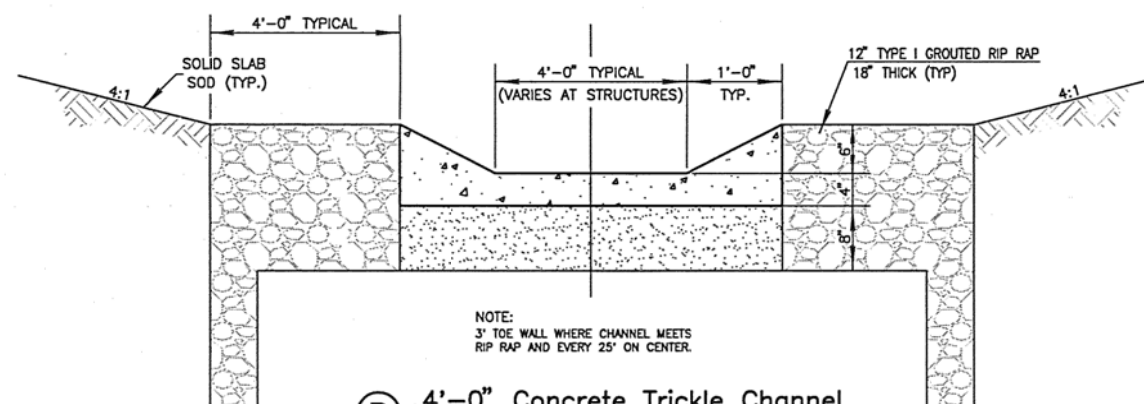
GENERAL NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT OKLAHOMA STANDARD SPECIFICATION.
2. REINFORCING STEEL IN BOTTOM SLAB SHALL BE SUPPORTED ON METAL BAR CHAIRS. CHAIRS SHALL BE SUPPORTED ON TIMBER PLANK OR CLASS 'C' CONCRETE STRIPS SPACED AT 4' CENTER TO CENTER. THE TOP OF SUPPORTS SHALL BE AT THE ELEVATION OF THE BOTTOM OF THE FOOTING.
3. REINFORCING STEEL IN TOP SLAB SHALL BE SUPPORTED ON METAL BAR CHAIRS SPACED AT 4' CENTER TO CENTER.
4. ALL CONCRETE EDGES SHALL HAVE A 1 1/2 INCH CHAMFER UNLESS OTHERWISE SHOWN OR NOTED. ALL CHAMFER STRIPS SHALL BE SIZED LUMBER.
5. ALL REINFORCING STEEL SHALL BE GRADE 60 AND HAVE A 2 INCH MINIMUM CLEARANCE UNLESS OTHERWISE SHOWN ON THE PLANS.
6. REINFORCING STEEL IN THE WALLS SHALL BE HELD IN PLACE BY METAL BAR CHAIRS. MAXIMUM SPACING OF CHAIRS SHALL BE 6' CENTER TO CENTER.
7. COST OF METAL CHAIRS, WOOD PLANK, OR CONCRETE STRIPS SHALL BE INCLUDED IN OTHER ITEMS OF WORK.
8. ROUGHEN SURFACE AT ALL CONSTRUCTION JOINTS.
9. ALL BAR BEND DIMENSIONS ARE OUT TO OUT.
10. MINIMUM REINFORCING STEEL LAP 4'-0" UNLESS OTHERWISE SHOWN (ALL COST BID FOR REINFORCING STEEL).
11. CONCRETE RETAINING WALLS SHALL BE STAINED UPON COMPLETION OF DETENTION FACILITY WITH COLOR OF STAIN TO BE SELECTED BY OWNER (ALL COSTS INCLUDED IN PRICE BID FOR CLASS A CONCRETE).



NOTE:
TYPE 1-A FILTER BLANKET SHALL CONSIST OF 4 INCHES "UPPER" COURSE AND 4 INCHES "LOWER" COURSE BACKING AS SPECIFIED BY ODOT, SECT. 713.03

A Rip Rap Outlet Structure
SCALE: NONE



NOTE:
3' TOE WALL WHERE CHANNEL MEETS RIP RAP AND EVERY 25' ON CENTER.

B 4'-0" Concrete Trickle Channel
SCALE: N.T.S.



DATE: 7-1-05

Case # PT04-130 Development # 04-175

Bristol Ponds

Detention Facility Plan (South)

City of Broken Arrow, Oklahoma

PLANS AND ESTIMATE PREPARED BY: **HRA** HALL, ROSENBAUM, ALMON & ASSOCIATES, INC.
1913 WEST TACOMA - SUITE C VOICE: (918) 258-3737
BROKEN ARROW, OKLAHOMA 74015 FAX: (918) 258-2554
CIVIL 3641 EXP. DATE: 8-30-2005

PLAN SCALE: 1"=50'

DRAFTED BY: RWB DATE: 12/22/04

PROFILE SCALE: RECOMMENDED

HORIZONTAL: DEVELOPMENT SERVICES

VERTICAL: RECOMMENDED

ENGINEERING SERVICES

FILE: DRAWING: DATE:

ATLAS PAGE NO: 999 SHEET 8 OF 13 SHEETS

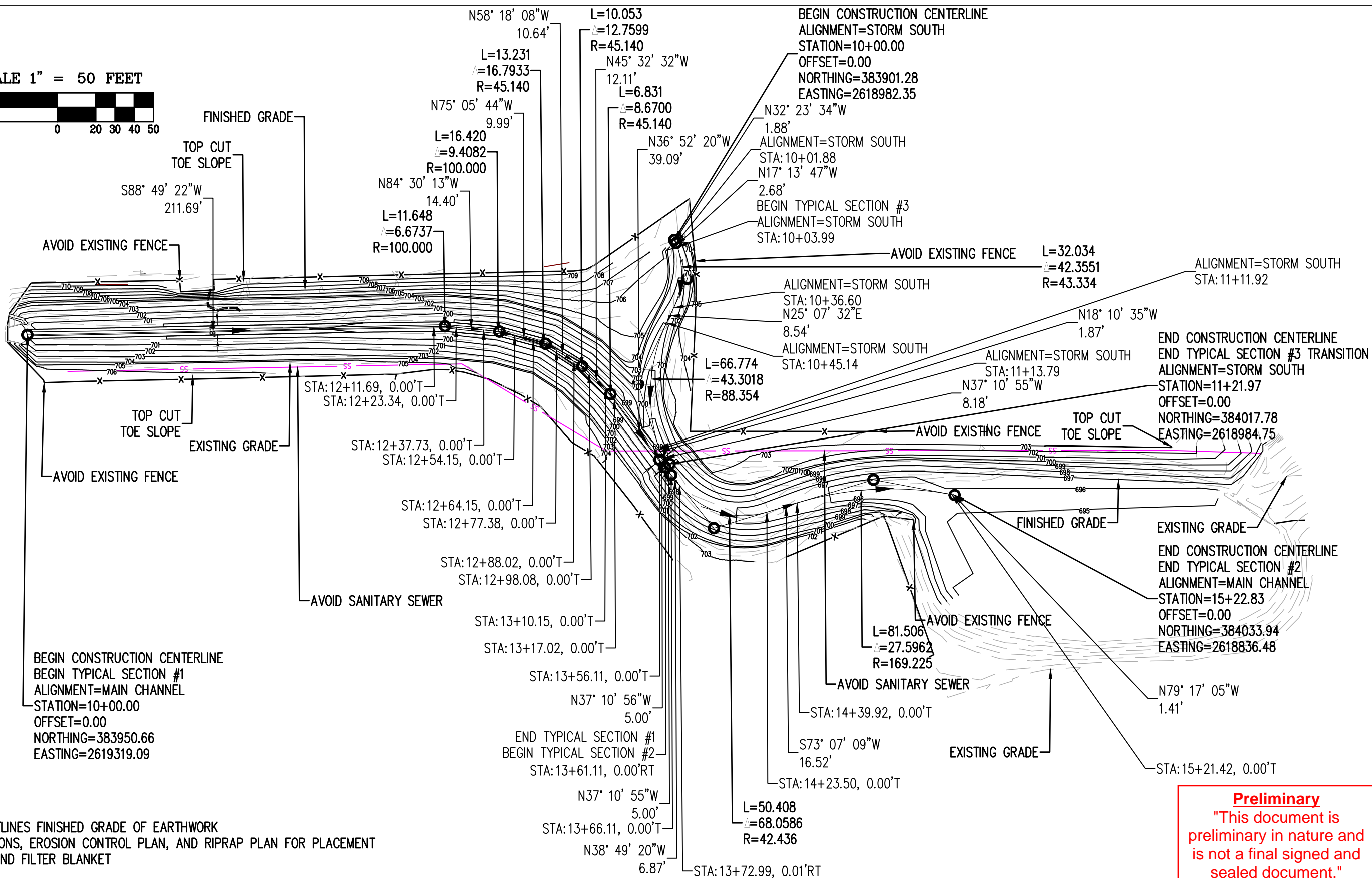
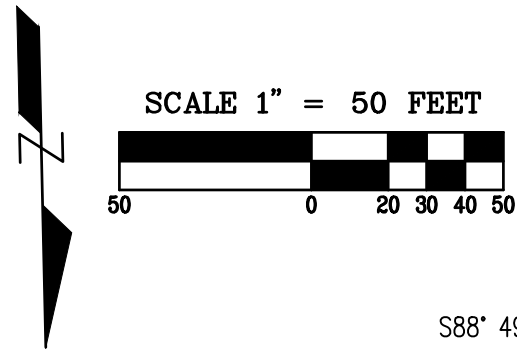
ALL CONSTRUCTION TO BE IN STRICT ACCORDANCE WITH CURRENT CITY OF BROKEN ARROW ENGINEERING DEPARTMENT SPECIFICATIONS, INCLUDING O.D.O.T. 1999 EDITION AND APPLICABLE SUPPLEMENTS.

| REVISION | BY | DATE |
|----------|----|------|
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Call Okie !

EXISTING UNDERGROUND LINES HAVE BEEN SHOWN TO THE EXTENT KNOWN. BEFORE YOU DIG, CONTACT OKLAHOMA ONE-CALL: 1-800-522-6543.

PATH: K:\10693\storm\FILE: SD pond.dwg
DATE: Jul 01, 2005 4:22PM



GRADING PLAN OUTLINES FINISHED GRADE OF EARTHWORK
SEE TYPICAL SECTIONS, EROSION CONTROL PLAN, AND RIPRAP PLAN FOR PLACEMENT
OF SOD, RIPRAP, AND FILTER BLANKET

Preliminary
"This document is preliminary in nature and is not a final signed and sealed document."



BRISTOL PONDS

GRADING PLAN

| DATE | REVISIONS | DESIGN | DRAFTED | DATE |
|------|-----------|----------|---------|-------------|
| | | CTC | RJE | 4/24/2025 |
| | | REVIEWED | XXX | PROJECT NO. |
| | | APPROVED | XXX | SW25080 |
| | | | | SHEET 9 |
| | | | | OF ## |

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