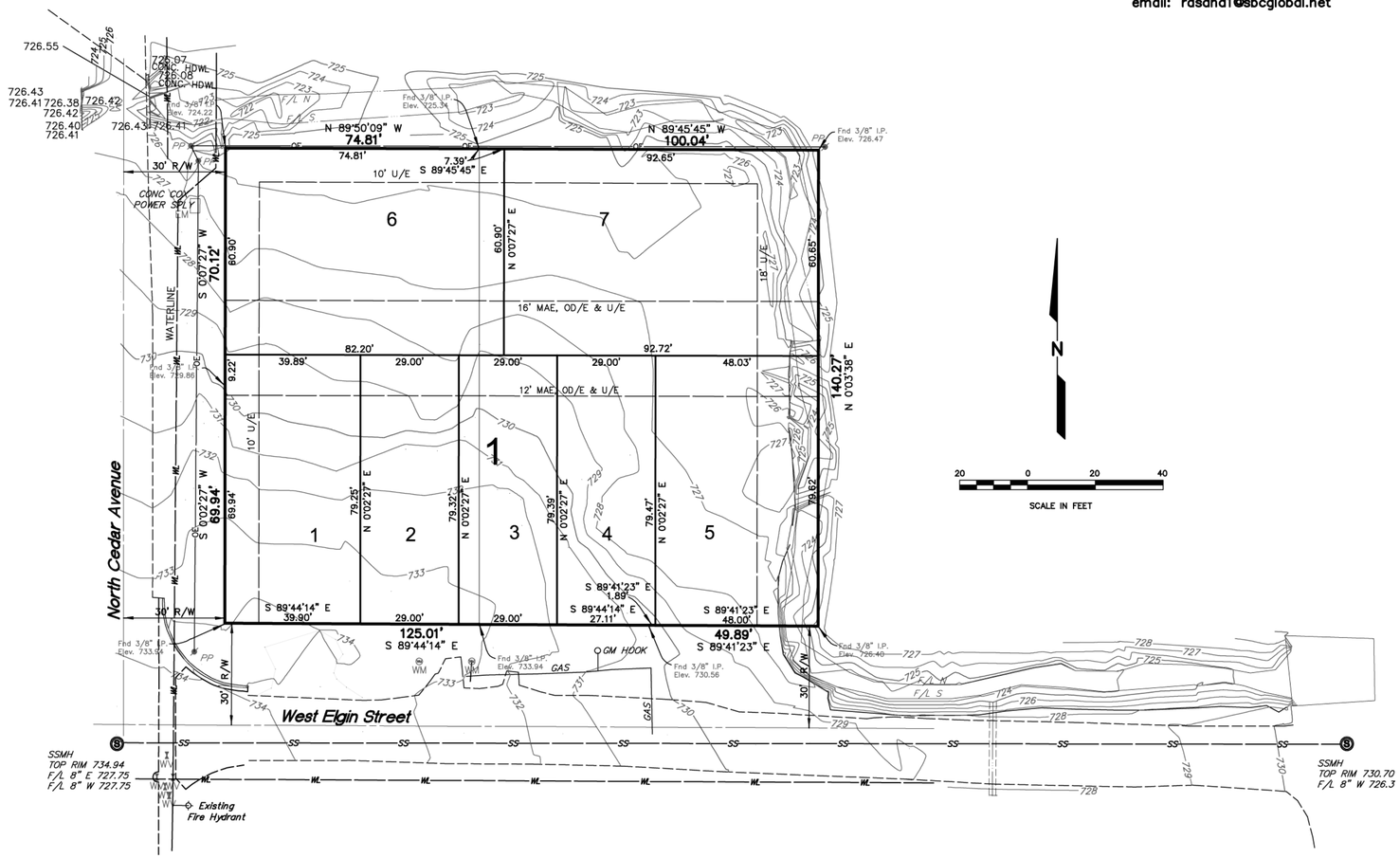
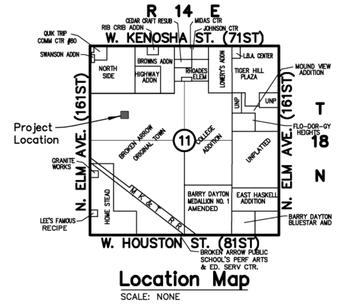
Rose District Row Homes

OWNER/DEVELOPER:
RoCo Properties, LLC
8624 Harp Boulevard
Broken Arrow, OK 74014
Contact: Adam Pray
Phone: (918) 850-3604
Email: AWPray@yahoo.com

SURVEYOR:
Huddleston Land Surveying, Inc.
C.A. No. 1613, Exp. 06/30/2017
P.O. Box 496
Vinita, OK 74301
Phone: (918) 451-1925

ENGINEER:
Sanders Engineering, Inc.
C.A. No. 2370, EXPIRATION DATE 6/30/2017
11502 S. 66th E. Ave.
Bixby, Oklahoma 74008
Phone: (918) 296-5067
Fax: (918) 296-5068
Contact: Robert David Sanders, PE.
email: rdsand1@sbcglobal.net





Location Map
SCALE: NONE

SUBDIVISION CONTAINS
SEVEN (7) LOTS IN ONE (1) BLOCK
GROSS SUBDIVISION AREA: 0.562 ACRES

Legend

B/L = BUILDING LINE
U/E = UTILITY EASEMENT
MAE = MUTUAL ACCESS EASEMENT
OD/E = OVERLAND DRAINAGE EASEMENT
ACC = ACCESS PERMITTED
LNA = LIMITS OF NO ACCESS
R/W = RIGHT OF WAY

Bench Mark

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PRELIMINARY
NOT FOR CONSTRUCTION

DATE	REVISIONS

CITY OF BROKEN ARROW
Where opportunity lives

N W E S
0 20 40 60

Rose District Row Homes

COVER SHEET

SCALE:	DESIGN	DATE	DRAFTED	DATE
HORZ. 1"=20'	RDS	June 2017	GSA	June 2017
VERT. 1"=5'	REVIEWED	DATE	APPROVED	DATE
DRAWING NAME: RoCo-Cover.dwg	SHEET 1 OF 7		PROJECT NO. 171-258 FILE 1814.11	

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TEMPORARY EROSION CONTROL

SMALL GRAINS SUCH AS OATS, RYE, WHEAT, SUDANS AND SORGHUMS ARE THE MOST FEASIBLE TEMPORARY VEGETATION TO CONTROL EROSION. THE PRACTICE IS EFFECTIVE FOR AREAS WHERE THE SOIL IS LEFT EXPOSED FOR A PERIOD OF 6 TO 12 MONTHS. THE TIME PERIOD MAY BE SHORTER DURING PERIODS OF EROSIVE RAINFALL.

1. PRIOR TO SEEDING, NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, DIKES, STRAW FIBER MATRIX ROLLS, ETC., SHALL BE INSTALLED.
2. TEMPORARY VEGETATIVE PRACTICE IS USUALLY APPLIED PRIOR TO THE COMPLETION OF FINAL GRADING OF THE SITE.
3. IF THE AREA TO BE SEEDED HAS BEEN RECENTLY LOOSENED TO THE EXTENT THAT AN ADEQUATE SEEDBED EXISTS, NO ADDITIONAL TREATMENT IS REQUIRED. HOWEVER IF THE AREA TO BE SEEDED IS PACKED, CRUSTED, AND/OR HARD, THE TOP LAYER OF SOIL SHALL BE LOOSENED BY DISCING OR OTHER SUITABLE MEANS.
4. FERTILIZER SHALL BE APPLIED AT A RATE OF 600 POUNDS PER ACRE OR 15 POUNDS PER 1000 SQUARE FOOT USING 10-20-10 OR EQUAL.
5. SOILS KNOWN TO BE HIGHLY ACIDIC SHALL BE LIME TREATED.
6. SEEDING OPTIONS ARE AS FOLLOWS:

PLANT	QUANTITY PER ACRE	QUANTITY PER 1000 S.F.	PLANTING DATE	DEPTH
ANNUAL	40 LBS	0.90 LBS	09/15 TO 11/30	1/4 IN.
ELBON RYE	2 BU.	3.00 LBS	08/15 TO 11/30	2 IN.
WHEAT	2 BU.	3.00 LBS	08/15 TO 11/30	2 IN.
OATS	3 BU.	2.50 LBS	08/15 TO 11/30	2 IN.
SORGHUM	60 LBS	1.40 LBS	03/01 TO 09/15	2 IN.
SUDAN	40 LBS	0.90 LBS	04/01 TO 09/15	2 IN.

7. SEEDS SHALL BE DRILLED UNIFORMLY.
8. SEEDING IMPLEMENTS SHOULD BE USED AT RIGHT ANGLES TO THE GENERAL SLOPE TO MINIMIZE EROSION.
9. 1 TO 3 MONTHS AFTER PLANTING, THE SEEDED SITE SHALL BE TOP DRESSED WITH 8 POUNDS PER 1000 SQUARE FEET OR 350 POUNDS PER ACRE OF 33-0-0.
10. AREAS WHICH DO NOT DEVELOP A SUFFICIENT COVER SHALL BE REPLANTED.
11. THE SEEDED AREA SHALL BE WATERED WHEN FEASIBLE AND NEEDED.

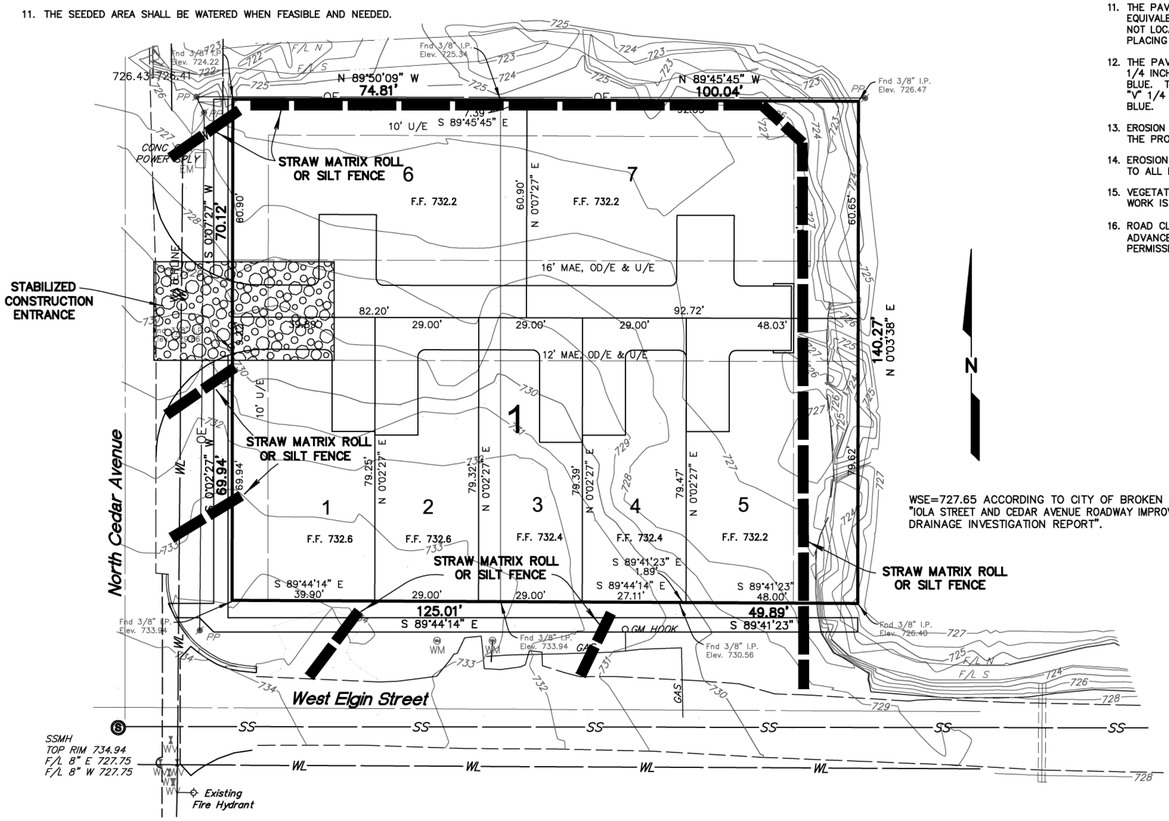
PERMANENT EROSION CONTROL

BERMUDA GRASS, KENTUCKY 31, TALL FESCUE AND WEEPING LOVEGRASS ARE SOME OF THE TYPES OF PERMANENT VEGETATION THAT MAY BE EFFECTIVELY USED TO CONTROL EROSION.

1. PRIOR TO SEEDING, NEEDED EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, DIKES, STRAW FIBER MATRIX ROLLS, ETC., SHALL BE INSTALLED.
2. THE SUBGRADE SHALL BE LOOSENED EVENLY TO A DEPTH OF 2 TO 3 INCHES AND 10-20-10 FERTILIZER (10 POUNDS PER 1000 SQUARE FOOT OR 450 POUNDS PER ACRE) SHALL BE MIXED WITH THE LOOSENED SURFACE SOIL BY DISCING OR OTHER SUITABLE MEANS.
3. SOILS KNOWN TO BE HIGHLY ACIDIC SHALL BE LIME TREATED.
4. SEEDING OPTIONS ARE AS FOLLOWS:

PLANT	QUANTITY PER ACRE	QUANTITY PER 1000 S.F.	PLANTING DATE	DEPTH
BERMUDA	10 LBS	0.25 LBS	04/01 TO 08/15	1/2 IN.
FESCUE	40 LBS	0.90 LBS	09/01 TO 11/01	1/2 IN.
LOVEGRASS	40 LBS	0.90 LBS	04/01 TO 06/30	1/2 IN.

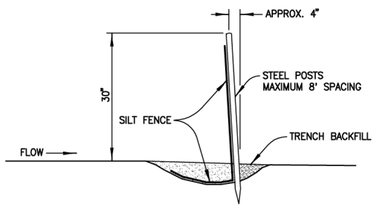
5. SEEDS SHALL BE DRILLED UNIFORMLY.
6. SEEDING IMPLEMENTS SHOULD BE USED AT RIGHT ANGLES TO THE GENERAL SLOPE TO MINIMIZE EROSION.
7. MULCH SHALL BE USED WHERE NEEDED.
8. THE AREA SHALL BE WATERED DAILY OR AS OFTEN AS NECESSARY TO MAINTAIN ADEQUATE SOIL MOISTURE UNTIL THE PLANTS GROW 1/2 TO 1 INCH.



WSE=727.65 ACCORDING TO CITY OF BROKEN ARROW "IOLA STREET AND CEDAR AVENUE ROADWAY IMPROVEMENTS DRAINAGE INVESTIGATION REPORT".

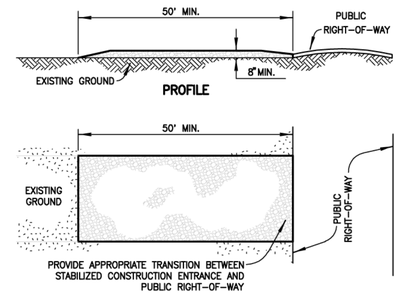
PAVING, DRAINAGE AND EROSION CONTROL NOTES

1. ALL PAVING, DRAINAGE AND EROSION CONTROL SHALL BE DESIGNED IN ACCORDANCE WITH THE CURRENT CITY OF BROKEN ARROW LAND SUBDIVISION CODE AND CONSTRUCTED IN ACCORDANCE WITH THE CURRENT CITY OF BROKEN ARROW STANDARD CONSTRUCTION SPECIFICATIONS.
2. MATERIALS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE CITY.
3. ALL PAVING, DRAINAGE AND EROSION CONTROL CONSTRUCTION SHALL BE INSPECTED BY THE CITY OF BROKEN ARROW.
4. ALL UTILITY CONSTRUCTION INCLUDING WATER, SEWER, AND STORM WATER SHALL BE COMPLETED PRIOR TO SUBGRADE PREPARATION.
5. SUBGRADE SHALL BE FREE OF ALL ORGANIC MATTER, TREATED, AND COMPACTED ACCORDING TO THE PLANS AND SPECIFICATIONS.
6. COMPACTION TESTS SHALL BE TAKEN A MINIMUM OF ONCE EVERY 4,500 SQUARE FEET FOR EACH EIGHT (8) INCH LIFT OF MATERIAL.
7. SUBGRADE SHALL BE PROOF ROLLED IF THE STABILITY OF THE MATERIAL IS QUESTIONED.
8. PAVING SHALL BE A MINIMUM OF 26' FACE TO FACE OF CURB AND CENTERED IN THE RIGHT OF WAY.
9. THE CONTRACTOR SHALL FURNISH THE FOLLOWING TESTING SERVICES BY A REPUTABLE INDEPENDENT TESTING LABORATORY APPROVED BY THE CITY:
   A. FIELD DENSITY TESTS OF EMBANKMENT, SUBGRADE, OR BASE, AT LOCATIONS SPECIFIED BY THE ENGINEER OR INSPECTOR.
   B. STABILITY, DENSITY, BITUMEN CONTENT AND GRADATION TESTS OF ASPHALTIC CONCRETE EVERY 200 TONS OR DAILY WHICH EVER IS LESS.
   C. COMPRESSION TEST OF CONCRETE CYLINDERS AT SEVEN (7) AND TWENTY-EIGHT (28) DAYS WITH ONE (1) OF EACH TESTS CONDUCTED FOR EVERY 100 CUBIC YARDS PLACED.
   D. ONE CORE SAMPLE, AT A LOCATION SPECIFIED BY THE ENGINEER OR INSPECTOR FOR EVERY 8,000 SQUARE FEET OF PAVEMENT.
10. THE PAVING CONTRACTOR SHALL ADJUST ALL VALVE BOXES TO GRADE AFTER PAVING OF STREETS HAS BEEN COMPLETED.
11. THE PAVING CONTRACTOR SHALL PLACE A CONCRETE COLLAR TWO (2) FEET SQUARE AND EQUIVALENT IN THICKNESS TO THE STREET BEING CONSTRUCTED, AROUND EACH VALVE BOX NOT LOCATED IN A PAVED AREA. THE VALVE BOX SHALL BE ADJUSTED TO GRADE PRIOR TO PLACING OF THE CONCRETE COLLAR.
12. THE PAVING CONTRACTOR SHALL MARK ALL WATER LINE CROSSINGS BY CUTTING A "W" 1/4 INCH DEEP IN THE FACE OF THE CURB, OVER THE CROSSING, AND PAINTING THE "W" BLUE. THE PAVING CONTRACTOR SHALL MARK ALL WATER VALVE LOCATIONS BY CUTTING A "V" 1/4 INCH DEEP IN THE FACE OF THE CURB, OVER THE VALVE, AND PAINTING THE "V" BLUE.
13. EROSION CONTROL SHALL START WITH INITIAL CONSTRUCTION AND BE PRACTICED THROUGHOUT THE PROJECT.
14. EROSION CONTROL MEASURES SUCH AS SILT FENCE SHALL BE CONSTRUCTED ADJACENT TO ALL DRAINAGE WAYS.
15. VEGETATIVE COVER SHALL BE ESTABLISHED ON ALL DISTURBED AREAS AS SOON AS THE WORK IS COMPLETED.
16. ROAD CLOSURES MUST BE COORDINATED A MINIMUM OF TWENTY FOUR (24) HOURS IN ADVANCE. ROADS WILL NOT BE CLOSED FOR OVER EIGHT (8) HOURS WITHOUT WRITTEN PERMISSION FROM THE ENGINEERING AND CONSTRUCTION DIRECTOR.



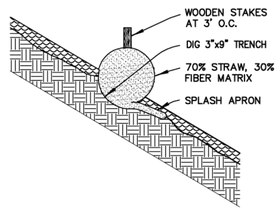
1. POSTS SHALL BE ANGLED SLIGHTLY TOWARD RUNOFF SOURCE.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN AND BACKFILLED.
3. THE TRENCH SHOULD BE 6" DEEP BY 3' TO 4' WIDE TO ALLOW SILT FENCE TO BE LAID IN AND BACKFILLED.
4. SILT FENCE SHALL BE FASTENED TO POSTS OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE POSTS.
5. INSPECTION SHALL BE FREQUENT & REPAIR OR REPLACEMENT PROMPT.
6. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO IMPEDE STORMWATER FLOW.
7. TRAPPED SEDIMENT SHALL BE DISPOSED OF IN AN APPROVED MANNER AND LOCATION WHICH WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6" TO 9" AND DISPOSED OF AS IN NOTE 7 ABOVE.

(A) Silt Fence Detail
SCALE: NONE



1. STONE SIZE AASHTO DESIGNATION M43, SIZE NO.2 (2-1/2" TO 1-1/2"). USE CRUSHED STONE.
2. LENGTH – AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
3. THICKNESS – NOT LESS THAN EIGHT(8) INCHES.
4. WIDTH – NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WASHING – WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.
6. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY BY THE OWNER.

(B) Stabilized Construction Entrance
SCALE: NONE



(C) Straw Fiber Matrix Roll
SCALE: NONE

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DATE	REVISIONS

CITY OF BROKEN ARROW
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N W E S
0 20 40 60

Rose District Row Homes

EROSION CONTROL

SCALE:	DESIGN	DATE	DRAFTED	DATE
HORZ. 1"=20'	RDS	June 2017	GSA	June 2017
VERT. N/A	REVIEWED	DATE	APPROVED	DATE
DRAWING NAME: RoCo-Erosion.dwg	SHEET 2 OF 7		PROJECT NO. 171-258 FILE 1814.11	

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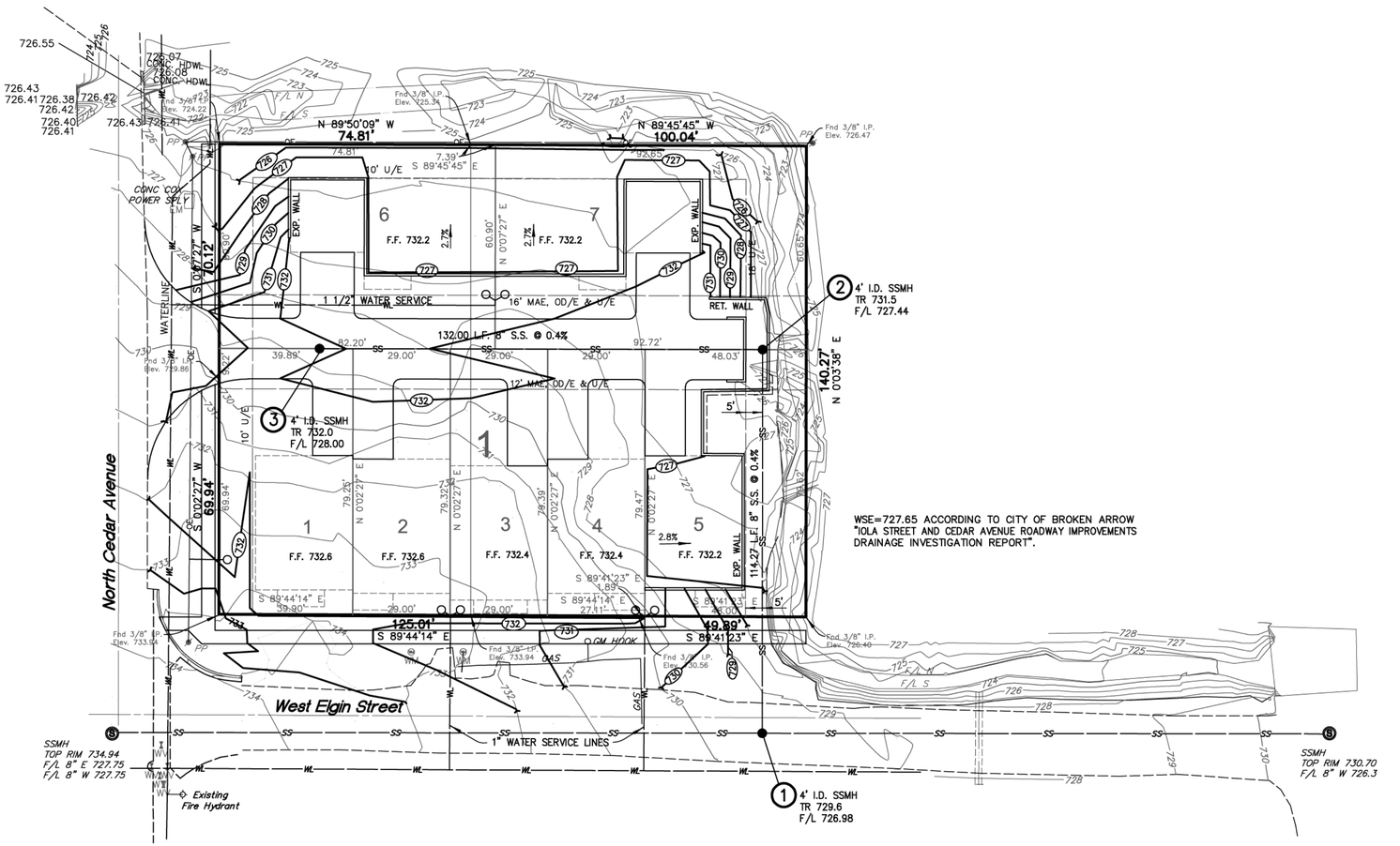

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Rose District Row Homes

GRADING PLAN

SCALE:	DESIGN	DATE	DRAFTED	DATE
HORZ. 1"=20'	RDS	June 2017	GSA	June 2017
VERT. N/A	REVIEWED	DATE	APPROVED	DATE
DRAWING NAME: RoCo-Grading.dwg	SHEET 3 OF 7		PROJECT NO. 171-258 FILE 1814.11	

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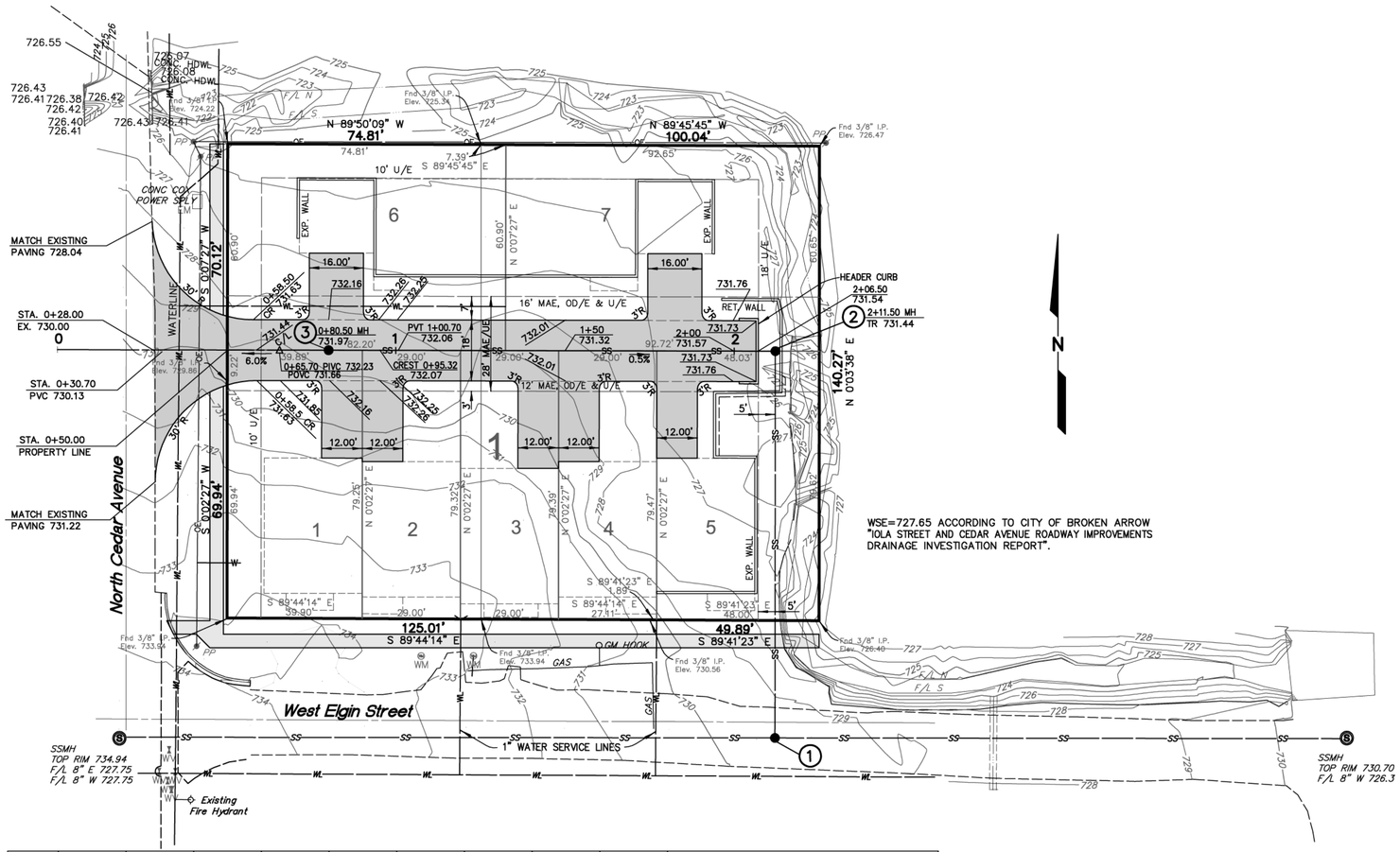

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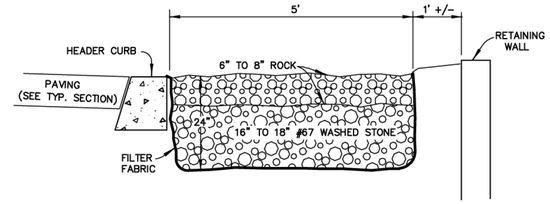

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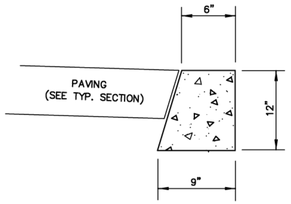

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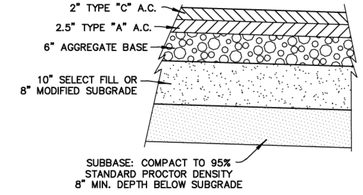

TYPICAL PAVING SECTION

PRELIMINARY
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DATE	REVISIONS

CITY OF BROKEN ARROW
Where opportunity lives

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0 20 40 60

Rose District Row Homes

PAVING

SCALE:	DESIGN	DATE	DRAFTED	DATE
HORZ. 1"=20'	RDS	June 2017	GSA	June 2017
VERT. 1"=5'	REVIEWED	DATE	APPROVED	DATE
DRAWING NAME: RoCo-Paving.dwg	SHEET 4 OF 7		PROJECT NO. 171-258 FILE 1814.11	

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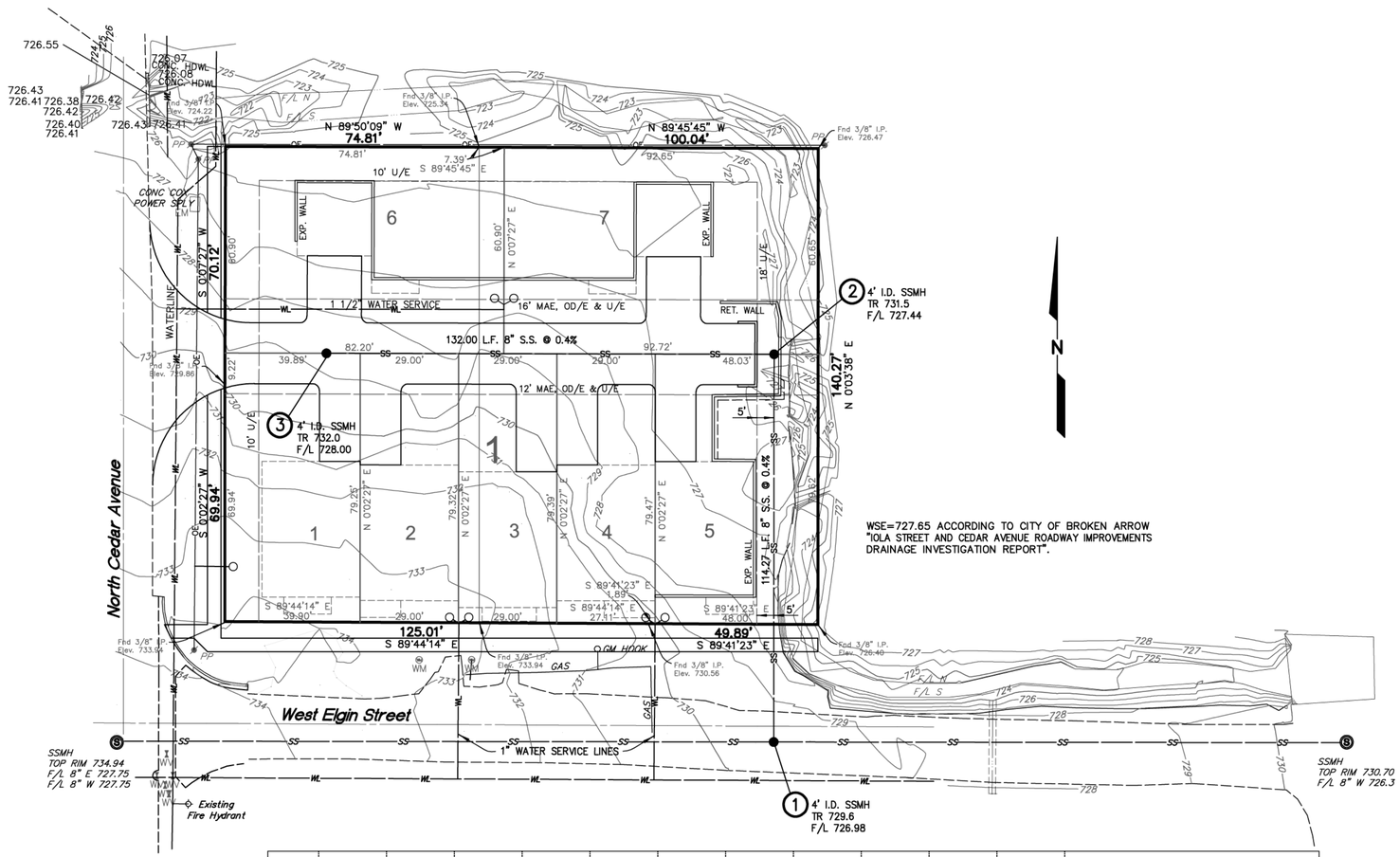

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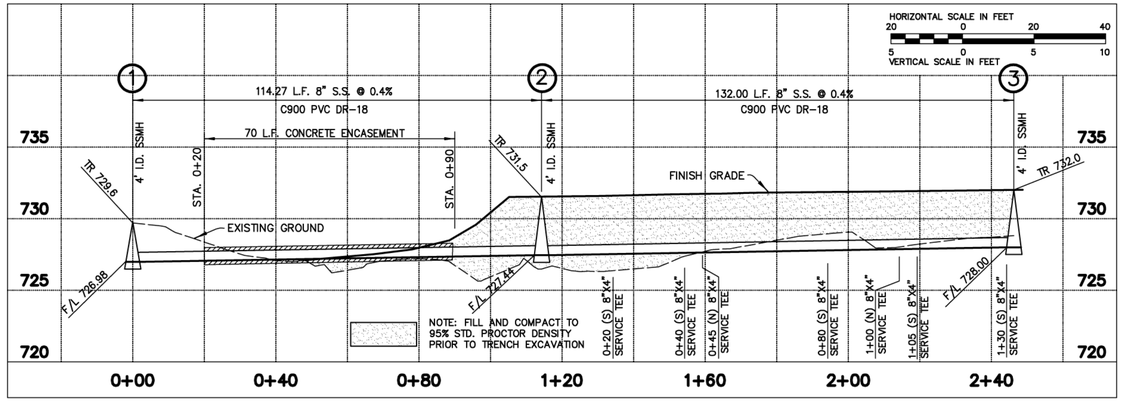

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DATE	REVISIONS

CITY OF BROKEN ARROW
Where opportunity lives

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0 20 40 60

Rose District Row Homes

SANITARY SEWER

SCALE:	DESIGN	DATE	DRAFTED	DATE
HORZ. 1"=20'	RDS	June 2017	GSA	June 2017
VERT. 1"=5'	REVIEWED	DATE	APPROVED	DATE
DRAWING NAME: RoCo-Sewer.dwg	SHEET 5 OF 7		PROJECT NO. 171-258 FILE 1814.11	

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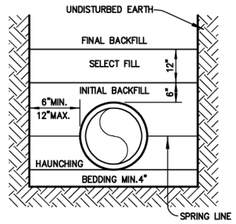
NON–PAVED AREAS		
P V C	DUCTILE IRON	CONCRETE
EXCAVATED MATERIAL	EXCAVATED MATERIAL	EXCAVATED MATERIAL
SELECT FILL	SELECT FILL	SELECT FILL
SAND	SAND	SAND
SAND	SAND	SAND
3/8" CHIPS	3/8" CHIPS	3/8" CHIPS

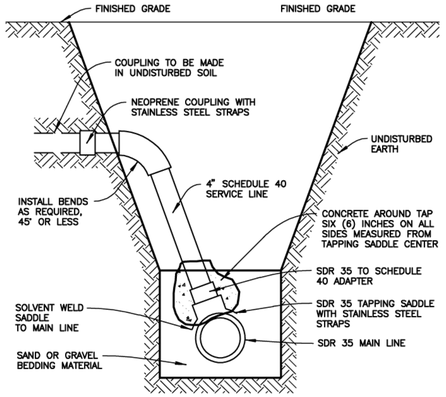
PAVED AREAS		
P V C	DUCTILE IRON	CONCRETE
CRUSHED ROCK	CRUSHED ROCK	CRUSHED ROCK
CRUSHED ROCK	CRUSHED ROCK	CRUSHED ROCK
CRUSHED ROCK	CRUSHED ROCK	CRUSHED ROCK
SAND	SAND	SAND
3/8" CHIPS	3/8" CHIPS	3/8" CHIPS



NOTES:

1. SELECT FILL CONSISTS OF EXCAVATED MATERIALS CONTAINING NO ROCKS LARGER THAN 2 INCHES.
2. CRUSHED ROCK SHALL BE ODOT TYPE A ROCK.
3. BEDDING REQUIRED FOR ALL SANITARY SEWER REPLACEMENT PROJECTS IN ROCK EXCAVATION AND FOR LEVELING TRENCH IN NEW INSTALLATION.
4. COMPACTION REQUIREMENTS:
   A. NON–PAVED AREAS: 90% MAXIMUM STANDARD PROCTOR DENSITY FOR COHESIONLESS SOILS AND 85% FOR COHESIVE SOILS.
   B. PAVED AREAS: 95% MAXIMUM STANDARD PROCTOR DENSITY FOR COHESIONLESS SOILS.
5. FILLS OVER 10 FEET DEEP — MATERIAL IN THE AREA FROM SELECT FILL TO BEDDING SHALL BE 3/4" CRUSHER RUN, WELL GRADED.
6. FLOWABLE FILL MAY BE SUBSTITUTED FOR ALL MATERIALS IN ROAD CROSSING.

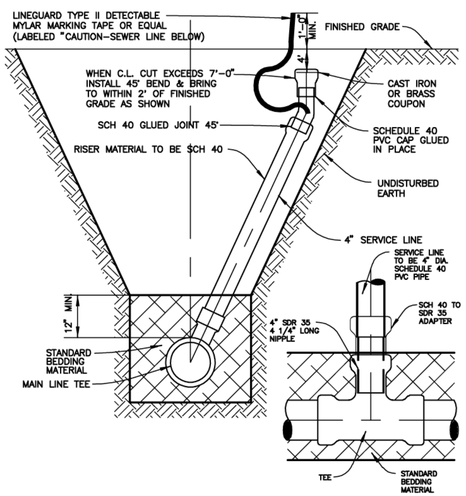
SANITARY SEWER PIPE BEDDING DETAIL
CITY OF BROKEN ARROW SS 01



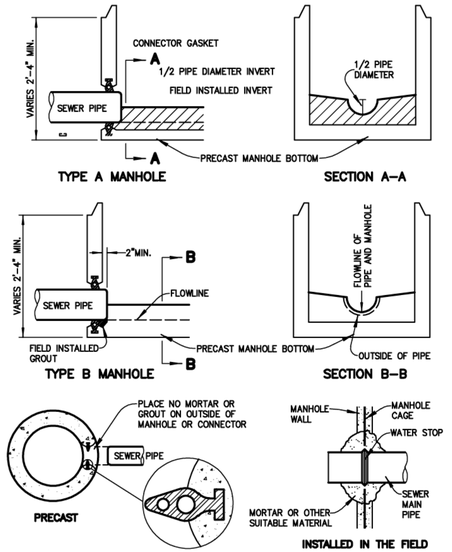
NOTES:

1. PVC SHOWN, HOWEVER, CLAY TILE, CONCRETE, AND DUCTILE IRON SHALL BE TAPPED IN SAME MANNER WITH CHANGE OF TAPPING SADDLE AND EXPANDING POLYURETHANE IN PLACE OF SOLVENT WELDING.
2. ALL MAIN LINE HOLES TO BE SAWED OR DRILLED AND COUPON PRESENTED AT TIME OF INSPECTION.
3. TAPS SHALL BE LEFT UNCOVERED FOR ONE (1) FOOT ON EACH SIDE OF SADDLE, UNTIL TAP IS INSPECTED.

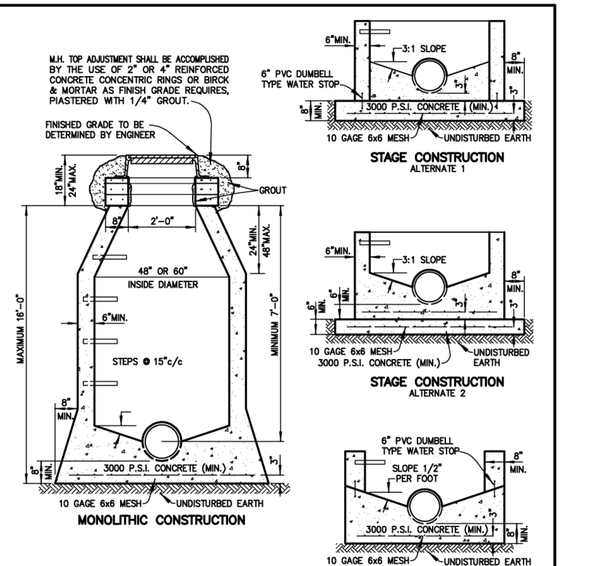
SANITARY SEWER TAP DETAIL
(EXISTING SEWER)
CITY OF BROKEN ARROW SS 02



SANITARY SEWER RISER DETAIL
(NORMAL TRENCH)
CITY OF BROKEN ARROW SS 03



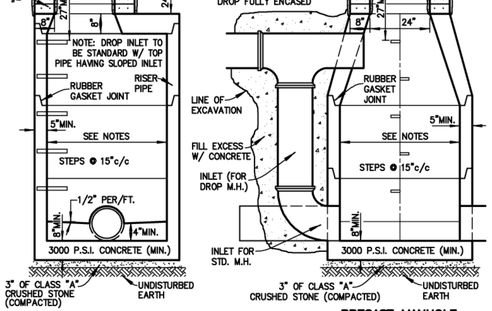
SANITARY SEWER MANHOLE PIPE CONNECTOR DETAILS
CITY OF BROKEN ARROW SS 06

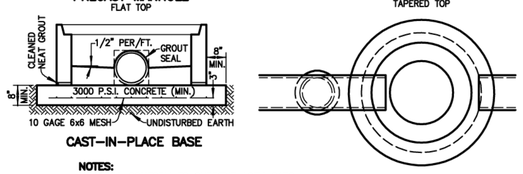


NOTES:

1. STEP DETAIL SHOWN ON STANDARD DRAWING SS 11.
2. LOW SLUMP CONCRETE SHALL BE PLACED IN THE FOOTINGS AND LOWER WALLS, AND SHALL BE PLACED AND VIBRATED IN ONE FOOT LIFTS.
3. AN INSPECTOR MUST BE PRESENT BEFORE AND DURING THE PLACING OF THE CONCRETE.
4. THIS MANHOLE SHALL NOT BE USED IN PAVED STREETS OR OTHER TRAVELED AREAS.
5. THE CONCRETE MUST SET FOR 48 HOURS BEFORE PIPE INSIDE OF MANHOLE IS TRIMMED.
6. (ALTERNATE 3) INVERT MUST BE FORMED AT TIME OF BOTTOM POUR.
7. WATER STOPS MAY BE ELIMINATED IF BARREL OF MANHOLE IS POURED WITHIN 4 HOURS AFTER BASE IS CLEANED OF ALL MUD, SILT AND DEBRIS.
8. FLAT TOP AND ECCENTRIC TOP ACCEPTABLE.

CAST IN PLACE MANHOLE DETAIL
CITY OF BROKEN ARROW SS 07





NOTES:

1. SHALL CONFORM TO CURRENT ASTM C478.
2. 8" TO 18" PIPE, 4' ID MANHOLE REQUIRED.
3. 21" TO 27" PIPE, 5' ID MANHOLE REQUIRED.
4. OVER 27" PIPE MANHOLE ID AS SPECIFIED BY ENGINEER.
5. MANHOLES LESS THAN 4'–6" IN HEIGHT SHALL HAVE A

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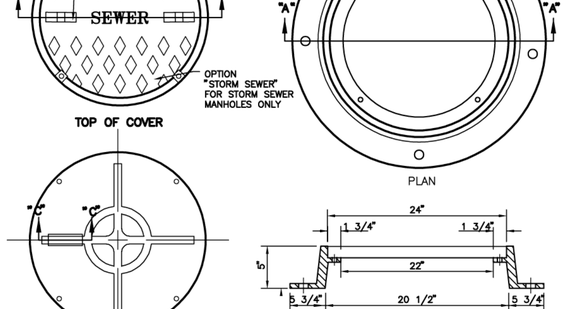
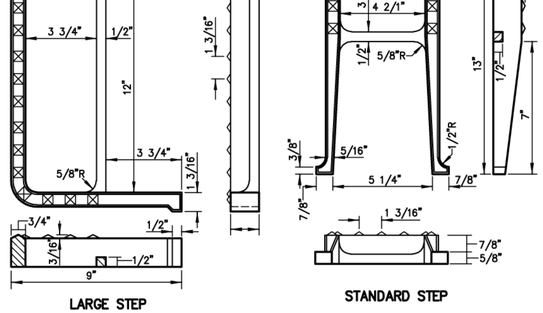
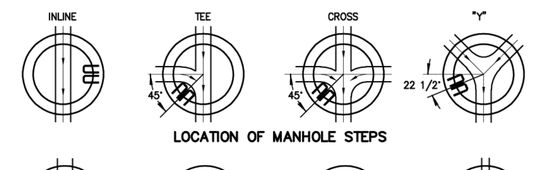
PRECAST MANHOLE DETAIL
CITY OF BROKEN ARROW SS 08



NOTE:
1. TWO PICK BARS ARE STANDARD.
2. WATER–TIGHT O–RING & FOUR 5/8"x1 1/2" STAINLESS STEEL BOLTS ARE FURNISHED WITH SET.
3. FOUR 1 1/4" ANCHOR BOLT HOLES ARE CAST INTO FLANGE
4. REQUIRED MIN. WEIGHT 300 LBS.

MANHOLE FRAME AND COVER DETAIL
CITY OF BROKEN ARROW SS 09A





MANHOLE STEPS & INVERT DETAILS
CITY OF BROKEN ARROW SS 11

Robert David Sanders
DATE:
SANDERS ENGINEERING, INC. CERTIFICATE OF AUTHORIZATION NO. CA 2370

REGISTERED PROFESSIONAL ENGINEER
ROBERT DAVID SANDERS
10138
OKLAHOMA

DATE	REVISIONS

CITY OF BROKEN ARROW
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0 50 100 150

Rose District Row Homes

SANITARY SEWER DETAILS

SCALE:	DESIGN	DATE	DRAFTED	DATE
HORZ. AS SHOWN	RDS	June 2017	GSA	June 2017
VERT. N/A	REVIEWED	DATE	APPROVED	DATE
DRAWING NAME: RoCo-WnS-Dtls.dwg	SHEET 6 OF 7		PROJECT NO. 171-258 FILE 1814.11	

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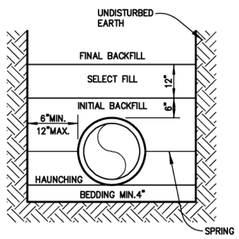


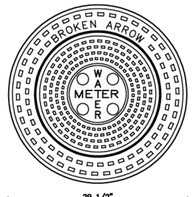
NON–PAVED AREAS		
P V C	DUCTILE IRON	CONCRETE
EXCAVATED MATERIAL	EXCAVATED MATERIAL	EXCAVATED MATERIAL
SELECT FILL	SELECT FILL	SELECT FILL
SELECT FILL	SELECT FILL	SELECT FILL
SELECT FILL	SELECT FILL	SELECT FILL
SAND	SAND	SAND

PAVED AREAS		
P V C	DUCTILE IRON	CONCRETE
CRUSHED ROCK	CRUSHED ROCK	CRUSHED ROCK
CRUSHED ROCK	CRUSHED ROCK	CRUSHED ROCK
CRUSHED ROCK	CRUSHED ROCK	CRUSHED ROCK
SAND	SAND	SAND
SAND	SAND	SAND

NOTES:

1. SELECT FILL CONSISTS OF EXCAVATED MATERIALS CONTAINING NO ROCKS LARGER THAN 2 INCHES.
2. CRUSHED ROCK SHALL BE ODOT TYPE A BASE
3. BEDDING REQUIRED ONLY FOR ROCK EXCAVATION.
4. COMPACTION REQUIREMENTS:
   A. NON– PAVED AREAS: 90% MAXIMUM STANDARD PROCTOR DENSITY FOR COHESIONLESS SOILS AND 85% FOR COHESIVE SOILS.
   B. PAVED AREAS: 95% MAXIMUM STANDARD PROCTOR DENSITY FOR COHESIONLESS SOILS.
5. FILLS OVER 10 FEET DEEP – MATERIAL IN THE AREA FROM SELECT FILL TO BEDDING SHALL BE 3/4" CRUSHER RUN WELL GRADED.
6. FLOWABLE FILL MAY BE SUBSTITUTED FOR ALL MATERIALS IN ROAD CROSSING.
7. PAVED AREA INCLUDES 2" BEHIND CURB.

WATER PIPE BEDDING DETAIL
CITY OF BROKEN ARROW W 01

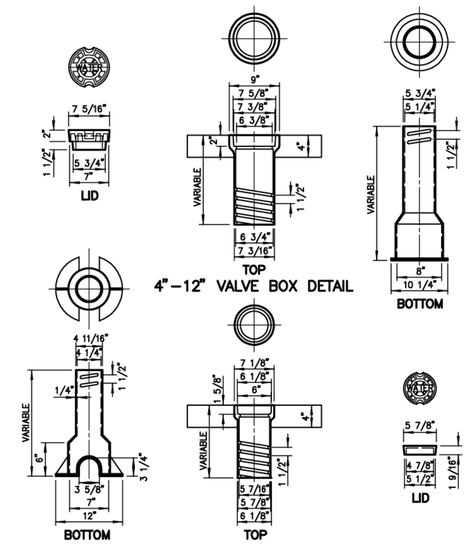


	WEIGHT
LID	46 LBS
RING	61 LBS
SET	107 LBS

NOTES:

1. METER RING IS CAST WITH SIX BOLT/RIVIT HOLES THROUGH THE SKIRT FOR ATTACHMENT TO 28" DIAMETER CORRUGATED STEEL METER CAN. SPECIFY CAN HEIGHT WHEN ORDERING.
2. METER LID TO HAVE KEYED LOCKING MECHANISM.

WATER VALVE VAULT FRAME AND LID DETAIL
CITY OF BROKEN ARROW W 03

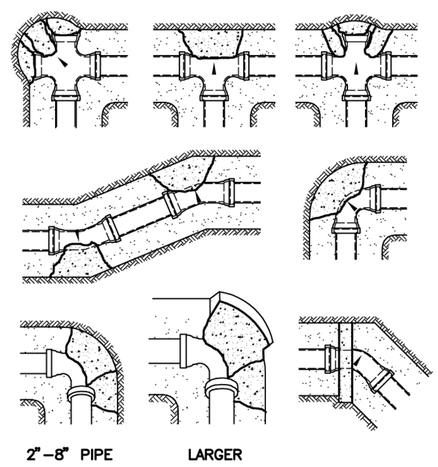


NOTES:

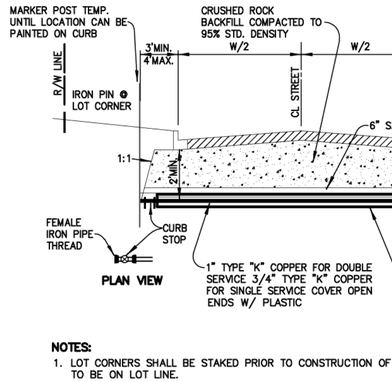
1. WATER LINE CONTRACTOR TO PLACE 2 FOOT SQUARE CONCRETE PAD AROUND EACH WATER VALVE AFTER FINAL GRADING HAS BEEN COMPLETED AND TRENCHES HAVE SETTLED.
2. VALVE BOXES REQUIRING OVER 2 ADDITIONAL BOTTOM SECTIONS SHALL BE EXTENDED USING PVC PIPE WITH A BOTTOM AND TOP SECTION PLACED ON TOP OF THE PVC PIPE.

2" – 3" VALVE BOX DETAIL

VALVE BOX DETAIL
CITY OF BROKEN ARROW W 04



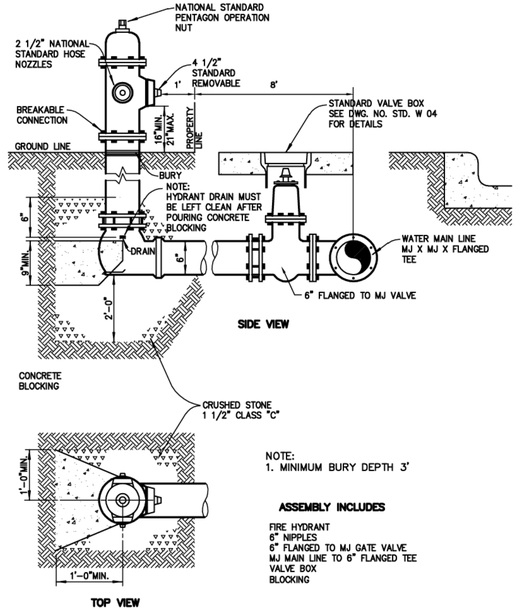
THRUST BLOCK DETAILS
CITY OF BROKEN ARROW W 06



NOTES:

1. LOT CORNERS SHALL BE STAKED PRIOR TO CONSTRUCTION OF SERVICE LINES, CROSSING TO BE ON LOT LINE.
2. DETECTABLE MYLAR MARKING TAPE (LIFEGUARD TYPE II OR EQUAL) TO BE INSTALLED OVER COPPER SERVICE AS SHOWN.
3. CROSSING NOT REQUIRED IN LOOPED CUL–DE–SAC.
4. COPPER SHALL NOT BE SPLICED.
5. CROSSING TO BE INSPECTED BEFORE TRENCH IS BACKFILLED.
6. IF ROCK IS USED IN BACKFILL, COPPER SHALL BE PLACED IN SCHEDULE 40 PVC SLEEVE
7. SERVICE LINE AND FITTINGS BY PLUMBING CONTRACTOR.

Water Line Street Crossing Detail
CITY OF BROKEN ARROW W 09



FIRE HYDRANT ASSEMBLY DETAIL
CITY OF BROKEN ARROW W 09

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TELEPHONE

Robert David Sanders

DATE:

REGISTERED PROFESSIONAL ENGINEER — ROBERT DAVID SANDERS 10138 — OKLAHOMA

SANDERS ENGINEERING, INC. CERTIFICATE OF AUTHORIZATION NO. CA 2370

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WATERLINE DETAILS

SCALE:	DESIGN	DATE	DRAFTED	DATE
HORZ. AS SHOWN	RDS	June 2017	GSA	June 2017
VERT. N/A	REVIEWED	DATE	APPROVED	DATE
DRAWING NAME: RoCo-WnS-Dtls.dwg	SHEET 7 OF 7		PROJECT NO. 171-258 FILE 1814.11	

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