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SECHREST 3RD PLAT

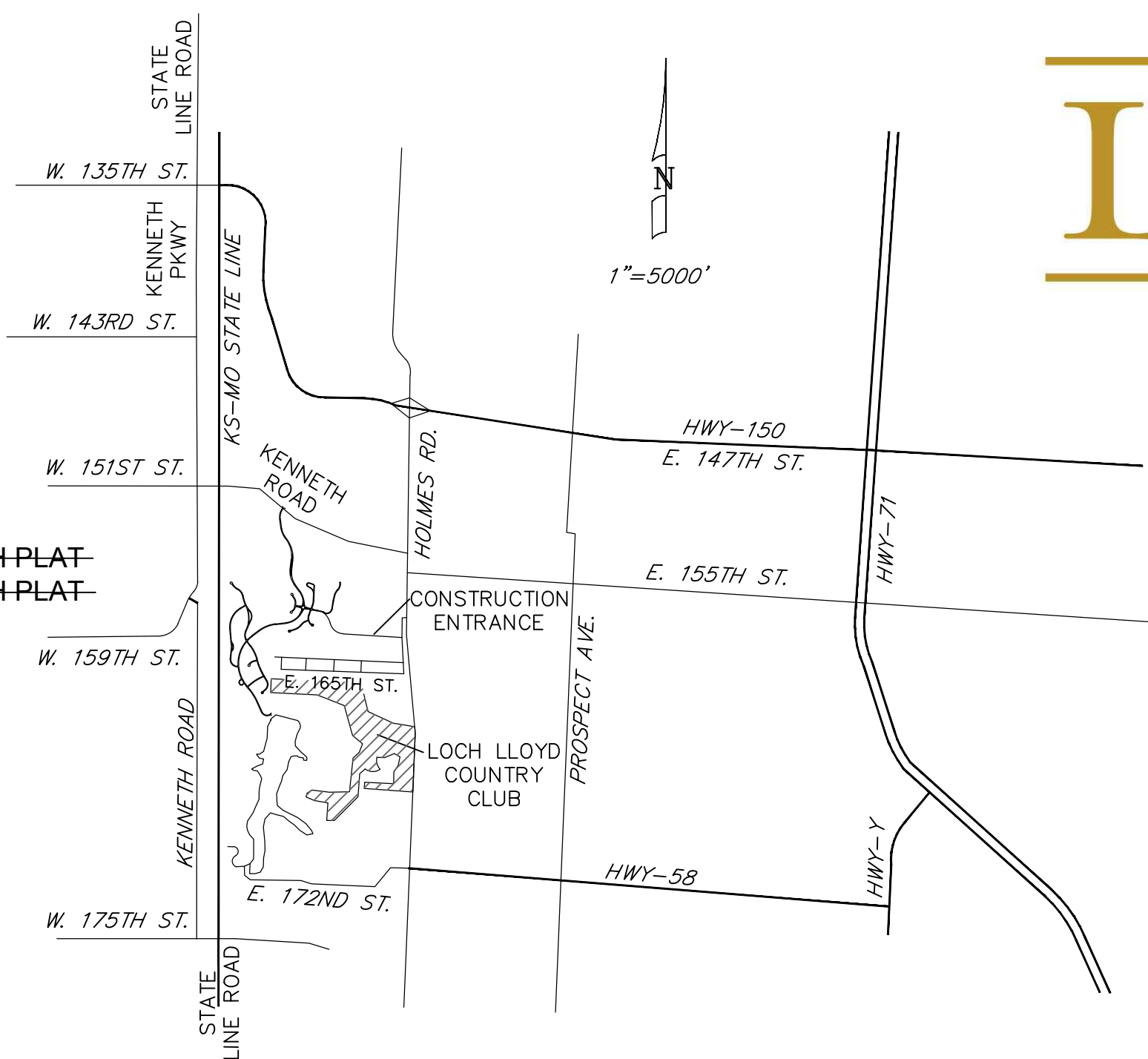
STREET AND STORM SEWER PLANS EROSION CONTROL PLANS WATERMAIN AS-BUILT PLANS SANITARY AS-BUILT PLANS

VILLAGE OF LOCH LLOYD, CASS COUNTY, MISSOURI

SEC. 7, TWP. 46N, RNG. 33W AND
SEC. 23, TWP. 14S, RNG. 25E



LOCH LLOYD



VICINITY MAP

REFER SHEETS C102, C121, C131, C141 FOR SURVEY CONTROL FOR THIS PROJECT.

CERTIFICATION

I HAVE REVIEWED THESE PLANS AND UNDERSTAND WHAT IS PROPOSED. THE WORK WILL BE ACCOMPLISHED IN ONE CONTRACT WITH A WORK BREAKDOWN AS FOLLOWS:

1. GENERAL CONTRACTOR

ANY INCIDENTAL WORK NOT SPECIFICALLY PERMITTED (i.e. FINAL CLEANUP) WILL BE COMPLETED BY THE GENERAL CONTRACTOR.

DEVELOPER: S-9 REDEV, L.L.C.
11150 OVERBROOK RD
LEAWOOD, KS 66211
PHONE: 816-509-7754

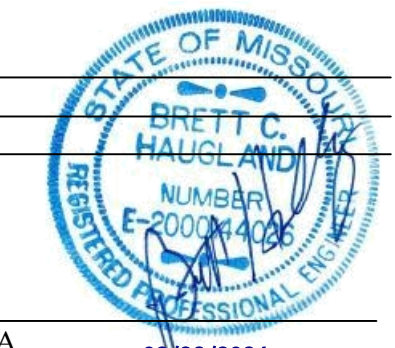
DALE BROUK CO-MANAGER DATE

CERTIFICATION BLOCK

I CERTIFY THAT THIS PROJECT HAS BEEN DESIGNED, AND THESE PLANS PREPARED, TO MEET OR EXCEED THE DESIGN CRITERIA OF THE VILLAGE OF LOCH LLOYD, MISSOURI IN CURRENT USAGE, EXCEPT AS INDICATED BELOW:

EXCEPTIONS:

1. NONE
- 2.
- 3.



BRETT HAUGLAND, P.E. I.A. 02/23/2026 DATE
PROJECT MANAGER



TRENT SHRIDER, P.E. DATE
DESIGN ENGINEER

APPROVED BY:

HOWARD WITHEY DATE
MANAGER
NORTHWEST CASS COUNTY WATER & SEWER RESOURCE DISTRICT

SPECIFICATIONS

THE SPECIFICATIONS FOR THIS PROJECT SHALL BE THE AMERICAN PUBLIC WORKS ASSOCIATION "STANDARD SPECIFICATIONS AND DESIGN CRITERIA". THE STANDARD SPECIFICATIONS THROUGH AND INCLUDING THE LATEST AMENDMENTS SHALL BE A PART OF THESE PROJECT DRAWINGS AND SPECIFICATIONS AND ARE INCORPORATED HEREIN BY REFERENCE. THE MORE STRINGENT OF THESE STANDARD SPECIFICATIONS AND THOSE PREPARED BY THE ENGINEER PREPARING THESE PLANS SHALL GOVERN. IN ADDITION THE VILLAGE OF LOCH LLOYD WATER/SEWER SPECIFICATIONS.

UTILITIES

AT&T - TRANSMISSION (JUSTIN RAHM)	678-231-5933
AT&T - DISTRIBUTION (BRENT RAMIREZ)	913-383-4884
LOCH LLOYD - NW CASS COUNTY RESOURCE BOARD (WATER AND SEWER SERVICES - HEATH ROSE)	816-916-9365
KCP&L (HEATH LENAHAN)	816-276-5545
MCI/WESTERN UNION	800-MCI-WORK
SPIRE ENERGY (DORSEY TROUTMAN)	816-400-3327
MISSOURI PUBLIC SERVICE	816-353-5000 OR 737-7821
CHARTER - SPECTRUM (ANASTASIYA VARSHYTSKA)	913-643-4205
PANHANDLE GAS-ENERGY TRANSFER (BRIAN ANDERSON)	913-906-1512
TALLGRASS ENERGY (PAUL ERB)	913-837-3671
KANSAS GAS SERVICE	913-599-8940



Know what's below.
Call before you dig.

AS-BUILT



FEBRUARY 23, 2026

EROSION CONTROL BLANKET

NOTE: ON SHALLOW SLOPES, PROTECTIVE EROSION CONTROL BLANKETS MAY BE APPLIED ACROSS THE SLOPE.

NOTE: WHERE THERE IS A BERM AT THE TOP OF THE SLOPE, BRING THE MATERIAL OVER THE BERM AND ANCHOR IT BEHIND THE BERM.

NOTE: ON STEEP SLOPES, APPLY PROTECTIVE BLANKET PERPENDICULAR TO THE DIRECTION OF FLOW AND ANCHOR SECURELY.

NOTE: BRING MATERIAL DOWN TO A LEVEL AREA BEFORE TERMINATING THE INSTALLATION.

NOTE: IN DITCHES, APPLY PROTECTIVE COVERING PARALLEL TO THE DIRECTION OF FLOW. USE CHECK SLOTS AS REQUIRED. AVOID JOINING MATERIAL IN THE CENTER OF THE DITCH IF AT ALL POSSIBLE. FOLLOW BLANKET MANUFACTURER'S RECOMMENDATIONS FOR ALLOWABLE VELOCITY AND SHEAR STRESS.

EROSION CONTROL BLANKET NOTES (1 OF 2):

A) SITE PREPARATION:
 AFTER SITE HAS BEEN SHAPED AND GRADED, PREPARE A FRIABLE SEEDBED RELATIVELY FREE FROM CLODS AND ROCKS MORE THAN 1 1/2 INCHES IN DIAMETER AND ANY FOREIGN MATERIAL THAT WILL PREVENT UNIFORM CONTACT OF THE PROTECTIVE COVERING WITH THE SOIL SURFACE.

B) PLANTING:
 LINE, FERTILIZE, AND SEED IN ACCORDANCE WITH SEEDING OR PLANTING PLAN. WHEN USING JUTE MESH ON A SEEDING AREA, APPLY APPROXIMATELY ONE HALF THE SEED AFTER LAYING THE MAT. THE PROTECTIVE COVERING CAN BE LAID OVER SPRIGGED AREAS WHERE SMALL GRASS PLANTS HAVE BEEN INSERTED INTO THE SOIL. WHERE GROUND COVERS ARE TO BE PLANTED, LAY THE PROTECTIVE COVERING FIRST AND THEN PLANT THROUGH THE MATERIAL AS PER PLANTING PLAN.

C) LAYING AND STAPLING:
 IF INSTRUCTIONS HAVE BEEN FOLLOWED, ALL NEEDED CHECK SLOTS WILL HAVE BEEN INSTALLED, AND THE PROTECTIVE COVERING WILL BE LAID ON A FRIABLE SEEDBED FREE FROM CLODS, ROCKS, ROOTS, ETC. THAT MIGHT IMPEDE GOOD CONTACT.

1. START LAYING THE PROTECTIVE COVERING FROM THE TOP OF THE CHANNEL OR SLOPE AND UNROLL DOWN-GRADE. ALLOW TO LAY LOOSELY ON SOIL; DO NOT STRETCH.
2. UPSLOPE ENDS OF THE BLANKET SHOULD BE BURIED IN AN ANCHOR SLOT NO LESS THAN 6-INCHES DEEP. TAMP EARTH FIRMLY OVER THE MATERIAL. WHEN TOP IS RELATIVELY FLAT, EXTEND BLANKET ABOUT 40 INCHES AWAY FROM SLOPE.
3. STAPLE THE MATERIAL AT A MINIMUM OF EVERY 12 INCHES ACROSS THE TOP END.
4. EDGES OF THE MATERIAL SHALL BE STAPLED EVERY 3 FEET. WHERE MULTIPLE WIDTHS ARE LAID SIDE BY SIDE, THE ADJACENT EDGES SHALL BE OVERLAPPED A MINIMUM OF 6 INCHES AND STAPLED TOGETHER.
5. STAPLES SHALL BE PLACED DOWN THE CENTER, STAGGERED WITH THE EDGES AT 3-FOOT INTERVALS.

D) TROUBLESHOOTING:
 CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL, IF ANY OF THE FOLLOWING OCCUR:

1. MOVEMENT OF THE BLANKET OR EROSION UNDER THE BLANKET IS OBSERVED.
2. VARIATIONS IN TOPOGRAPHY ON SITE INDICATE EROSION CONTROL MAT WILL NOT FUNCTION AS INTENDED; CHANGES IN PLAN MAY BE NEEDED, OR A BLANKET WITH A SHORTER OR LONGER LIFE MAY BE NEEDED.
3. DESIGN SPECIFICATIONS FOR SEED VARIETY, SEEDING DATES, OR EROSION CONTROL MATERIALS CANNOT BE MET; SUBSTITUTION MAY BE REQUIRED. UNAPPROVED SUBSTITUTIONS COULD RESULT IN FAILURE TO ESTABLISH VEGETATION.

E) MAINTENANCE & INSPECTION
 INSPECT CONTROLS AFTER EACH RAIN EVENT OF 1/2 INCH OR GREATER, AND EVERY 7 DAYS UNTIL VEGETATION IS ESTABLISHED, FOR EROSION OR UNDERMINING BENEATH THE NETTING, BLANKETS, OR MATS. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE MATERIAL, ADD SOIL, TAMP DOWN, AND RESEED; RESECURE THE MATERIAL IN PLACE. IF NETTING, BLANKETS OR MATS BECOME DISLOCATED OR DAMAGED, REPAIR OR REPLACE AND RESECURE IMMEDIATELY.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
EROSION CONTROL BLANKET	STANDARD DRAWING NUMBER ESC-04
SHEET 1 OF 2	ADOPTED:

SOURCE: MODIFIED FROM VA. DCR, 1992

EROSION CONTROL BLANKET INSTALLATION FOR CHANNELS

EROSION CONTROL BLANKET NOTES (2 OF 2):

F) STAPLES:
 STAPLES FOR ANCHORING BLANKET SHALL BE NO. 11-GAUGE WIRE OR HEAVIER. THEIR LENGTH SHALL BE A MINIMUM OF 6 INCHES. A LARGER STAPLE WITH A LENGTH OF UP TO 12 INCHES SHALL BE USED ON LOOSE, SANDY, OR UNSTABLE SOILS.

G) JOINING PRETECTIVE COVERINGS:
 OVERLAP THE END OF THE PREVIOUS ROLL A MINIMUM OF 6 INCHES AND STAPLE. STAPLE ACROSS THE END OF THE ROLL JUST BELOW THE ANCHOR SLOT AND ACROSS THE MATERIAL EVERY 6 INCHES.

H) TERMINAL END:
 AT THE POINT AT WHICH THE MATERIAL IS DISCONTINUED, OR WHERE THE PROTECTIVE COVERING MEETS A STRUCTURE OF SOME TYPE, STAPLE A MINIMUM OF EVERY 12 INCHES.

I) FINAL CHECK:
 THESE INSTALLATION CRITERIA MUST BE ADHERED TO:
 1. ALL DISTURBED AREAS ARE SEEDED.
 2. PROTECTIVE BLANKET IS IN UNIFORM CONTACT WITH THE SOIL.
 3. ALL LAP JOINTS ARE SECURE.
 4. ALL STAPLES ARE DRIVEN FLUSH WITH THE GROUND.

NOTE: APPROXIMATELY 200 STAPLES ARE REQUIRED PER 100 SQ. YDS. OF MATERIAL ROLL ANCHOR SLOTS, JUNCTION SLOTS, AND CHECK SLOTS TO BE BURIED 6" TO 12" DEEP.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
EROSION CONTROL BLANKET	STANDARD DRAWING NUMBER ESC-05
SHEET 2 OF 2	ADOPTED:

SOURCE: MODIFIED FROM VA. DCR, 1992

TEMPORARY CONSTRUCTION ENTRANCE

TEMPORARY CONSTRUCTION ENTRANCE PAD NOTES:

A) INSTALLATION:

1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS. IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. IF SLOPE TOWARDS THE PUBLIC ROAD EXCEEDS 2%, CONSTRUCT A 6-TO 8-INCH HIGH RIDGE WITH 3H:1V SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE EDGE OF THE PUBLIC ROAD TO DIVERT RUNOFF AWAY FROM IT.
4. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES ALONG PUBLIC ROADS.
5. PLACE STONE TO DIMENSIONS AND GRADE AS SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPED FOR DRAINAGE.
6. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE.
7. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.

B) TROUBLESHOOTING:

- a. INADEQUATE RUNOFF CONTROL TO THE EXTENT THAT SEDIMENT WASHES ONTO PUBLIC ROAD - INSTALL DIVERSIONS OR OTHER RUNOFF CONTROL MEASURES.
- b. SMALL STONE, THIN PAD, OR ABSENCE OF GEOTEXTILE FABRIC RESULTS IN RUTS AND MUDDY CONDITIONS AS STONE IS PRESSED INTO SOIL - INCREASE STONE SIZE OR PAD THICKNESS OR ADD GEOTEXTILE FABRIC.
- c. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC - EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.

C) INSPECTION AND MAINTENANCE:

1. INSPECT STONE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER 1/2-INCH OR GREATER STORM EVENTS.
2. RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL.
3. TOPDRESS WITH CLEAN 2-AND 3-INCH STONE AS NEEDED.
4. IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROAD. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.
5. REMOVE ALL TEMPORARY ROAD MATERIALS FROM AREAS WHERE PERMANENT VEGETATION WILL BE ESTABLISHED.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
TEMPORARY CONSTRUCTION ENTRANCE	STANDARD DRAWING NUMBER ESC-01
	ADOPTED:

SOURCE: MODIFIED FROM VA. DCR, 1992

SEEDING WITH HYDROMULCH SPECIFICATION

A 12-12-12 FERTILIZER SHALL BE INCORPORATED AT A RATE OF 200 LBS. PER ACRE INTO THE HYDROMULCH SLURRY.

HYDROMULCH PRODUCT SHALL BE A BONDED FIBER MATRIX (SPRAYMATT) AS SUPPLIED BY CENTRAL FIBER CORPORATION OR EQUAL (4814 FIBER LANE, WELLSVILLE, KANSAS 800-654-6117).

BONDED FIBER MATRIX SHALL BE MADE FROM NON-TOXIC, BIODEGRADABLE, VIRGIN WOOD FIBER. THE ONE 50 LB BAG PRODUCT DOES NOT REQUIRE ADDITIONAL TACKIFIERS TO PERFORM EROSION CONTROL MEASURES.

ADD 100 GALLONS OF WATER TO EACH 50 LB BAG OF SPRAYMATT. ADD SEED AND FERTILIZER TO SLURRY MIX. THE SLURRY SHOULD APPEAR AS A BLEND OF MATERIALS WITH NO SEPARATION OF WATER AND ADDITIVES. SLURRY SHALL BE HELD IN TRUCK FOR NO LONGER THAN 12 HOURS PRIOR TO APPLICATION.

MIX RATIO: 1 BAG IN APPROX. 100 GAL WATER
 REQUIRED USAGE: 3,000 LBS. PER ACRE

APPLY SPRAYMATT TO THE GROUND SURFACE FROM THE TOP OF THE SLOPE TO THE BOTTOM. ALLOW THE MATERIAL TO "RAIN ON" THE SURFACE. FIRST APPLY A PRIMARY COAT OVER THE SURFACE. THEN APPLY ADDITIONAL COATS OVER THE SAME AREA REPEATING THIS PROCEDURE UNTIL 100% COVERAGE IS ACHIEVED. DO NOT APPLY A THICK COAT IN A SINGLE PASS. APPLYING SPRAYMATT TO THE FLAT SURFACE AT THE TOP OF THE SLOPE WILL HELP TO ELIMINATE THE POSSIBILITY OF WATER GETTING UNDER THE MATERIAL AND CAUSING EROSION.

ALL AREAS DISTURBED BY NEW CONSTRUCTION OR MARKED TEMPORARY SEEDING SHALL BE SEEDED IN ACCORDANCE WITH APWA SECTION 2400 SEEDING AND SODDING. THE SEED MIX SHALL BE AS FOLLOWS WHEN USED WITH HYDROMULCH OR EROSION CONTROL FABRIC:

BOTANICAL NAME	COMMON NAME	P.L.S. RATE (LBS/ACRE)
FESTUCA OVINA	SHEEP FESCUE (SANDPIPER)	32
FESTUCA RUBRA	RED FESCUE (VICTOR)	32
FESTUCA ARUNDINACEA	TURF TYPE TALL FESCUE	226
POA PRATENSIS	KENTUCKY BLUEGRASS	32
LOLIUM MULTIFLORUM	ANNUAL RYEGRASS	38
TOTAL (LBS/ACRE)		360

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SEDIMENT FENCE

SEDIMENT FENCE

- EXCAVATE A 6" X 4" TRENCH.
- SET THE STAKES ALONG THE DOWN SLOPE SIDE OF THE TRENCH.
- STAPLE GEOTEXTILE MATERIAL TO STAKES AND EXTEND IT INTO AND AROUND THE BOTTOM OF THE TRENCH.
- BACKFILL AND COMPACT THE EXCAVATED SOIL OVER THE GEOTEXTILE IN THE TRENCH.

SHEET FLOW INSTALLATION (PERSPECTIVE VIEW)
NOT TO SCALE

DRAINAGEWAY INSTALLATION (FRONT ELEVATION)
NOT TO SCALE

NOTE: POINT A SHOULD BE HIGHER THAN POINT B.

SEDIMENT FENCE NOTES:

A) INSTALLATION:

- THE HEIGHT OF SEDIMENT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE AND SHALL NOT EXCEED 34 INCHES ABOVE THE GROUND SURFACE.
- THE FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE UNAVOIDABLE, FILTER CLOTH SHALL BE SECURELY SPLICED TOGETHER ONLY AT SUPPORT POSTS, WITH A MAX 6-INCH OVERLAP.
- DIG A TRENCH AT LEAST 6 INCHES DEEP AND 4 INCHES WIDE ALONG THE FENCE ALIGNMENT.
- DRIVE POSTS AT LEAST 24 INCHES INTO THE GROUND ON THE DOWNSLOPE SIDE OF THE TRENCH. SPACE POSTS A MAXIMUM OF 6 FEET APART.
- EXTRA-STRENGTH SEDIMENT FENCE FABRIC SHALL BE USED. POSTS FOR THIS TYPE OF FABRIC SHALL BE PLACED A MAXIMUM OF 6 FEET APART. THE SEDIMENT FABRIC SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING A MINIMUM OF ONE INCH LONG, HEAVY-DUTY WIRE STAPLES OR TIE-WIRES, AND EIGHT INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
- PLACE THE BOTTOM 1 FOOT OF FABRIC IN THE MINIMUM-OF-6-INCH DEEP TRENCH, LAPPING TOWARD THE UPSLOPE SIDE. BACKFILL WITH COMPACTED EARTH OR GRAVEL.
- IF A SEDIMENT FENCE IS TO BE CONSTRUCTED ACROSS A DITCH LINE OR SWALE, IT MUST BE OF SUFFICIENT LENGTH TO ELIMINATE ENDFLOW, AND THE PLAN CONFIGURATION SHALL RESEMBLE AN ARC OR HORSESHOE, PLACED ON A CONTOUR, WITH THE ENDS ORIENTED UPSLOPE. EXTRA-STRENGTH SEDIMENT FABRIC SHALL BE USED WITH A MAXIMUM 3-FOOT SPACING OF POSTS.
- TO REDUCE MAINTENANCE, EXCAVATE A SHALLOW SEDIMENT STORAGE AREA IN THE UPSLOPE SIDE OF THE FENCE. PROVIDE GOOD ACCESS IN AREAS OF HEAVY SEDIMENTATION FOR CLEAN OUT AND MAINTENANCE.
- SEDIMENT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

B) TROUBLESHOOTING:

- DETERMINE THE EXACT LOCATION OF UNDERGROUND UTILITIES, BEFORE FENCE INSTALLATION SO UTILITIES ARE NOT DISTURBED.
- GRADE ALIGNMENT OF FENCE AS NEEDED TO PROVIDE A BROAD, NEARLY LEVEL AREA UPSTREAM OF FENCE TO ALLOW SEDIMENT COLLECTION AREA.

C) INSPECTION MAINTENANCE:

- INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
- SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
- REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. AVOID DAMAGING OR UNDERMINING THE FENCE DURING CLEANOUT. SEDIMENT ACCUMULATION SHOULD NOT EXCEED 1/2 THE HEIGHT OF THE FENCE.
- REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY AND COMPLETELY STABILIZED.

AMERICAN PUBLIC WORKS ASSOCIATION
APWA KANSAS CITY METROPOLITAN CHAPTER
SEDIMENT FENCE STANDARD DRAWING NUMBER ESC-10 ADOPTED

SOURCE: MODIFIED FROM VA. DCR, 1992

STRAW WATTLE INSTALLATION GUIDE

DIAGRAM A

①

②

TYPICAL WATTLE SPACING BASED ON SLOPE GRADIENT

- BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3" (5-7.5 CM) DEEP X 9" (22.9 CM) WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UPSLOPE FROM THE ANCHOR TRENCH.
- PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY ABUT.
- SECURE THE WATTLE WITH 18-24" (45.7-61 CM) STAKES EVERY 3-4' (0.9-1.2 M) AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE LEAVING AT LEAST 2-3" (5-7.5 CM) OF STAKE EXTENDING ABOVE THE WATTLE. STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE.

WATTLE INLET PROTECTION

6" DIA FLOCCULENT TUBE
2" X 4"
CONCRETE GUTTER
CURB INLET
MAINTAIN ACCESS TO COVER FOR INSPECTION
FILTERED WATER

SPECIFIC APPLICATION
THIS METHOD OF INLET PROTECTION IS APPLICABLE AT CURB INLETS WHERE PONDING IN FRONT OF THE STRUCTURE IS NOT LIKELY TO CAUSE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

* 6" PERFORATED ADS DRAIN PIPE FILLED WITH CLEAN 3/4" GRAVEL, CAPPED AT EACH END AND COVERED WITH GEOTEXTILE SOCK MAY BE SUBSTITUTED FOR FIBER FLOCCULENT TUBE

FLOCCULENT TUBES HELD IN PLACE WITH 20 LB GRAVEL FILLED BAG AT EACH END OF TUBE. TUBE LENGTH SHALL BE A MINIMUM OF 4'-0" LONGER THE THROAT OPENING OF THE INLET.

WATTLE INLET PROTECTION

ROCK CHECK DAM

ROCK CHECK DAM 2 ACRES OR LESS OF DRAINAGE AREA
NOT TO SCALE

(SIDE VIEW)
NOT TO SCALE

2-10 ACRES OF DRAINAGE AREA
NOT TO SCALE

(SIDE VIEW)
NOT TO SCALE

SPACING BETWEEN CHECK DAMS
NOT TO SCALE

ROCK CHECK DAM NOTES:

A) CONSTRUCTION SPECIFICATIONS & INSTALLATION:

- THE DRAINAGE AREA OF THE DITCH OR SWALE BEING PROTECTED SHALL NOT EXCEED 2 ACRES WHEN A COARSE AGGREGATE IS USED ALONE AND SHALL NOT EXCEED 10 ACRES WHEN A COMBINATION OF CLASS 1 RIPRAP AND COARSE AGGREGATE IS USED. AN EFFORT SHOULD BE MADE TO EXTEND THE STONE TO THE TOP OF CHANNEL BANKS.
- THE MAXIMUM HEIGHT OF THE DAM SHALL BE 3 FEET. THE CENTER OF THE CHECK DAM IS AT THE SAME ELEVATION AS THE TOP OF THE OUTER EDGES.
- FOR ADDED STABILITY, THE BASE OF THE CHECK DAM CAN BE KEED INTO THE SOIL APPROXIMATELY 6 INCHES.
- THE MAXIMUM SPACING BETWEEN THE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS THE TOP OF THE DOWNSLOPE DAM.
- STONE SHOULD BE PLACED ACCORDING TO THE CONFIGURATION TO THE LEFT. HAND OR MECHANICAL PLACEMENT WILL BE NECESSARY TO ACHIEVE COMPLETE COVERAGE OF THE DITCH OR SWALE AND TO INSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES.
- GEOTEXTILE MAY BE USED UNDER THE STONE TO PROVIDE A STABLE FOUNDATION AND TO FACILITATE REMOVAL OF THE STONE.

C) INSPECTION AND MAINTENANCE:

- CHECK DAMS SHOULD BE CHECKED FOR SEDIMENT ACCUMULATION AFTER EACH STORM EVENT OF 1/2-INCH OR GREATER. SEDIMENT SHOULD BE REMOVED WHEN IT REACHES ONE HALF OF THE ORIGINAL HEIGHT OF THE DAM.
- REGULAR INSPECTIONS SHOULD BE MADE TO ENSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES. EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE DAM SHOULD BE CORRECTED.

D) REMOVAL OF PRACTICE:

UNLESS THEY ARE TO BE PERMANENT, CHECK DAMS MUST BE REMOVED WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED. IN TEMPORARY DITCHES AND SWALES, CHECK DAMS SHOULD BE REMOVED AND THE DITCH FILLED WHEN THEY ARE NO LONGER NEEDED. IN PERMANENT STRUCTURES, CHECK DAMS SHOULD BE REMOVED WHEN A PERMANENT LINING CAN BE INSTALLED. IN THE CASE OF GRASS-LINED DITCHES, CHECK DAMS SHOULD BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE DITCH OR SWALE. THE AREA BENEATH THE CHECK DAMS SHOULD BE SEEDED AND MULCHED IMMEDIATELY AFTER THEY ARE REMOVED. THE USE OF FILTER CLOTH UNDERNEATH THE STONE WILL MAKE REMOVAL OF THE STONE EASIER.

AMERICAN PUBLIC WORKS ASSOCIATION
APWA KANSAS CITY METROPOLITAN CHAPTER
ROCK CHECK DAM STANDARD DRAWING NUMBER ESC-10 ADOPTED

SOURCE: MODIFIED FROM VA. DCR, 1992

ROCK CHECK DAM



9000 STATE LINE ROAD
LEAWOOD, KANSAS 66206
11006 PARALLEL PARKWAY
KANSAS CITY, KANSAS 66109
TEL: (913) 642-6642
FAX: (913) 642-6941
cce@ceengineers.com



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LOCH LLOYD
 PLANNED RESIDENTIAL COMMUNITY
 VILLAGE OF LOCH LLOYD, CASS COUNTY, MISSOURI

PROJECT NO: LOCH LLOYD
DATE: 07 MAR 2023
DRAWN BY: TIS
CHECKED BY: BHI

REVISIONS
1- 4/18/23 WSD COMMENTS
2- 6/25/23 WSD COMMENTS
3- 7/15/23 BID SET

SHEET TITLE & NUMBER

EROSION CONTROL
DETAILS

SHEET
C107

GENERAL NOTES:

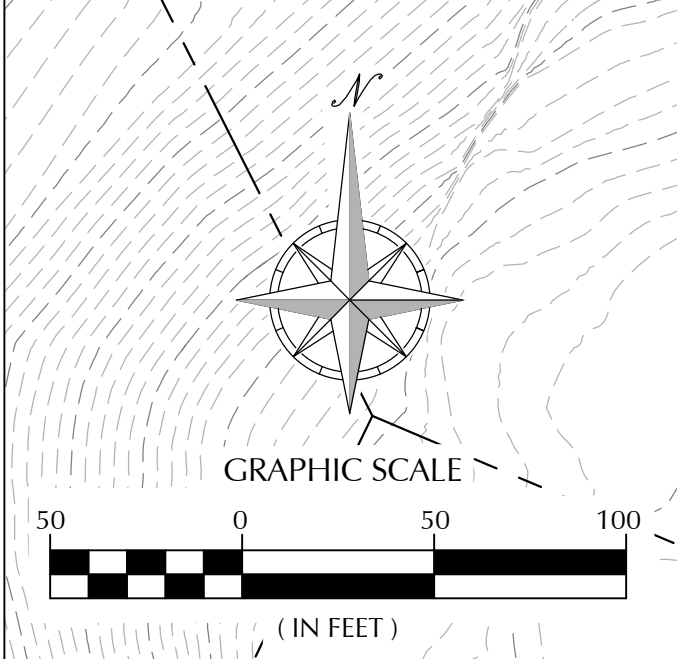
1. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE AMERICAN PUBLIC WORKS ASSOCIATION (APWA).
2. THE GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES, AS NOTED ON THE COVER SHEET, 48 HOURS PRIOR TO THE START OF CONSTRUCTION AND VERIFY ANY UTILITIES THAT MAY BE ENCOUNTERED.
3. THE INFORMATION ON THESE PLANS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED AS ACCURATE OR COMPLETE. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR FIELD LOCATION OF ALL UNDERGROUND UTILITY LINES PRIOR TO ANY EXCAVATION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO EXISTING UTILITIES, AND SHALL BE RESPONSIBLE FOR THE COORDINATION OF UTILITY ADJUSTMENTS.
4. THE CONTRACTOR SHALL RESTRICT ALL WORK AND STORAGE OF MATERIALS TO WITHIN PROPERTY LINES.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF GROUNDWATER AS REQUIRED BY CONDITIONS OF CONSTRUCTION.
6. ALL AREAS DISTURBED BY NEW CONSTRUCTION SHALL BE RESEEDED OR SODDED IN ACCORDANCE WITH APWA.
7. PRIOR TO ORDERING STRUCTURES, SHOP DRAWINGS SHOULD BE SUBMITTED TO CONTINENTAL CONSULTING ENGINEERS FOR REVIEW AND APPROVAL.
8. MATERIALS ENCOUNTERED DURING EXCAVATION SHALL BE CONSIDERED "CLASSIFIED". THESE MATERIALS SHALL BE AS DEFINED UNDER SECTION 2102.2 OF THE STANDARD SPECIFICATIONS AND DESIGN CRITERIA, KANSAS CITY METROPOLITAN CHAPTER, AMERICAN PUBLIC WORKS ASSOCIATION. SOFT MATERIALS MAY BE ENCOUNTERED, OVEREXCAVATION OF SOFT MATERIALS WILL BE REQUIRED AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER.
9. PRIOR TO MOBILIZATION, THE CONTRACTOR SHALL CONSTRUCT PERIMETER EROSION CONTROL MEASURES. SEE SITE DISTURBANCE PLANS FOR EROSION AND SEDIMENT CONTROL MEASURES.
10. ALL AREA OF SITE GRADING SHALL BE STRIPPED OF TOP SOIL AND THIS MATERIAL SHALL BE STOCKPILED FOR FUTURE USE WITHIN THIS PROJECT. AFTER ALL SITE GRADING HAS BEEN COMPLETED, THE TOPSOIL SHALL BE SPREAD IN LANDSCAPED AREAS AS DIRECTED BY THE OWNER'S REPRESENTATIVE. A MINIMUM OF 4" TOPSOIL SHALL BE STRIPPED AND RESPAID. A MINIMUM OF 12" TOPSOIL SHALL BE PLACED WITHIN MEDIAN ISLANDS.
11. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO SAVE EXISTING TREES ON THE PROJECT.
12. PRIOR TO PLACING FILL, ANY EXISTING SLOPES EXCEEDING 5:1 SHALL BE BENCHED. THE BENCHES SHALL BE WIDE ENOUGH TO ACCOMMODATE COMPACTION EQUIPMENT. ALL FILL SHALL BE PLACED IN UNIFORM HORIZONTAL LIFTS, WITH A LOOSE THICKNESS NOT EXCEEDING 8 INCHES. FILL PLACED WITHIN STRUCTURES AND BELOW PAVEMENTS SHALL BE COMPACTED TO A DENSITY OF AT LEAST 95% OF THE MAXIMUM DRY DENSITY PER ASTM D-698. VERIFY OPTIMUM MOISTURE RANGE WITH GEOTECHNICAL ENGINEER.
13. THE CONTRACTOR SHALL PROVIDE AT LEAST ONE (1,400) CHEMICALLY TREATED PORTABLE TOILET UNIT, "SATELLITE CORPORATION" OR EQUAL, FOR EVERY 20 WORKERS ON THE JOB SITE (IN NO CASE SHALL LESS THAN 1 BE PROVIDED). THE UNIT(S) SHALL REMAIN ON SITE DURING ALL ACTIVE PHASES OF THE CONSTRUCTION.
14. WHEN THE LIMITS OF EXCAVATION ENDOACH INTO THE DRIP LINE OF A TREE BY 1/4 THE RADIUS OR GREATER, THE ROOT SYSTEM SHALL BE SLICED BY MEANS OF A SMALL TRENCHER OR OTHER APPROVED METHOD TO A DEPTH OF 36" WITHIN THE DRIP LINE PRIOR TO EXCAVATION BY A BACKHOE OR DOZER. ROOTS BELOW 36" SHALL BE SLICED AND NOT RIPPED BY A BACKHOE BUCKET.

15. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE GEOTECHNICAL ENGINEER DURING ALL STAGES OF EMBANKMENT CONSTRUCTION TO VERIFY PROPER MATERIAL AND COMPACTION. GEOTECHNICAL REPRESENTATION SHALL BE ON SITE FOR FULL TIME INSPECTION DURING MAJOR CONSTRUCTION PROCESSES.
16. NO WORK SHALL COMMENCE UNTIL ALL PERMITS ARE OBTAINED. THESE MAY INCLUDE, BUT ARE NOT LIMITED TO: SITE DISTURBANCE PERMIT, GRADING PERMIT, AND PERMITS FROM THE STATE AND COUNTY.
17. THE CONTRACTOR SHALL VERIFY THE FLOWLINES OF ALL STORM SEWER CONNECTIONS/CROSSINGS PRIOR TO THE START OF CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
18. THE CONTRACTOR SHALL EXPOSE ALL UTILITIES AT PIPE CROSSINGS TO DETERMINE CONFLICTS PRIOR TO SETTING STRUCTURES OR LAYING PIPE. CONTRACTOR SHALL PROVIDE FOR TEMPORARY SHORING AND SUPPORT OF ALL UTILITIES ENCOUNTERED WHILE CONSTRUCTING THIS PROJECT.
19. WHILE THE STORM SEWER SYSTEM HAS BEEN DESIGNED TO CLEAR MAJOR UTILITIES, UNKNOWN CONFLICTS MAY EXIST, AND THE ENGINEER RESERVES THE RIGHT TO ADJUST THE STORM SEWER PIPE ELEVATIONS AS REQUIRED TO CLEAR CONFLICTS. WHERE THESE ADJUSTMENTS RESULT IN FLOWLINES BEING RAISED, OR LOWERED 1' MAXIMUM, THERE SHALL BE NO ADDITIONAL PAYMENT MADE FOR TRENCHING OR STRUCTURE CONSTRUCTION MODIFICATIONS.
20. FOR STORM SEWERS BEING PLACED UNDERNEATH PAVEMENT BACK FILL SHALL BE MODOT TYPE 5 AND COMPACTED IN LIFTS MONITORED BY GEOTECH.
21. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT ELEVATIONS ARE GRADED IN CONFORMANCE WITH THE APPROVED GRADING PLANS. ALSO, IF THE CONTRACTOR FINDS ANY DRAINAGE PROBLEM WITH THE APPROVED GRADING PLANS, HE MUST CONTACT THE ENGINEER FOR REDSIGN AND IS TO RECTIFY THE DRAINAGE PROBLEM.
22. ALL CAST-IN-PLACE CONCRETE SHALL USE GRANITE, CALCITE CEMENTED SANDSTONE, QUARTZITE, BASALT, DIABASE, RHYOLITE, OR TRAP ROCK FOR AGGREGATE IN CONCRETE MIX WITH A MIN OF 4,000 PSI AND 6%-8% AIR ENTRAINED. -KCMMB MIX DESIGN SUBMIT FOR REVIEW

23. AREAS TO RECEIVE FILL AND BACKFILL SHALL BE STRIPPED OF SURFACE VEGETATION, TOPSOIL (ANTICIPATED DEPTH OF 4 TO 15'), SOFT SOIL AND OTHER DELETERIOUS MATERIALS. THE EXPOSED SUBGRADE SHOULD BE OBSERVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF FILL. THE SUBGRADE SHALL BE PROOF ROLLED WITH A TANDDEM AXLE DUMP TRUCK LOADED TO APPROXIMATELY 20,000 POUNDS PER AXLE. ANY SOFT SOILS OR YIELDING AREAS OBSERVED DURING PROOF ROLLING SHOULD BE EXCAVATED AND BACKFILLED WITH SOIL OR CRUSHED ROCK COMPACTED TO THE DENSITIES SPECIFIED IN THE TYPICAL ROADWAY SECTIONS.
24. SUITABLE FILL MATERIAL SHALL CONSIST OF LOW PLASTICITY, COHESIVE SOIL WITH A LIQUID LIMIT LESS THAN 45 OR WELL GRADED MATERIALS. ACCEPTABLE FILL SOILS INCLUDE NON-ORGANIC MATERIALS DESIGNATED AS CL, CL-ML, SM, SC, SP, GP, AND GW AS DETERMINED BY ASTM D 2487. ON SITE SOILS CONSISTING OF HIGHLY PLASTIC SOILS (CH) CAN BE USED AS ENGINEERED FILL BUT SHOULD NOT BE PLACED WITHIN 18 INCHES OF FINAL PAVEMENT SUBGRADES UNLESS MODIFIED WITH CEMENT OR FLY ASH.
25. SOIL FILL SHALL BE PLACED IN MAXIMUM LOOSE LIFT THICKNESS AND COMPACTED TO A MINIMUM DENSITY OF 95% OF MAXIMUM DRY DENSITY ACCORDING TO ASTM D 698. SOIL FILL MATERIAL SHALL BE COMPACTED PER GEOTECHNICAL ENGINEERS RECOMMENDATIONS. DEPENDING ON THE SOIL MOISTURE CONTENT AT THE TIME OF CONSTRUCTION, AERATION OR WETTING COULD BE REQUIRED TO ACHIEVE THE RECOMMENDED COMPACTION. DELETERIOUS OR FROZEN MATERIAL SHOULD NOT BE INCLUDED IN THE FILL, AND THE FILL SHALL NOT BE PLACED ON SOFT MATERIALS OR FROZEN GROUND. SOILS THAT DO NOT MEET THE MINIMUM REQUIREMENTS SHALL BE REMOVED AND REPLACED TO THE DENSITIES AND COMPACTION STATED.
26. ROCK FILL MATERIAL MAY BE UTILIZED IN FILL UP TO 48 INCHES BELOW THE TOP OF SUBGRADE OR FINISH GRADE OF GRADED AREAS. ROCK FILL SHALL CONSIST OF ROCK HAVING A MAXIMUM DIMENSION OF 4" IN ANY DIRECTION. ROCK FILL SHALL BE PLACED IN SUCCESSIVE HORIZONTAL LAYERS OF LOOSE MATERIAL NOT GREATER THAN 8". THE ROCK FILL MATERIAL SHALL BE MIXED WITH SOIL AT A RATIO OF 50% ROCK-FILL MATERIAL TO 50% SOIL MATERIAL. VERIFY WITH GEOTECHNICAL ENGINEER ABOUT OPTIMUM MOISTURE.
27. CLAY SOILS WITHIN 24" FLOOR SLAB SUBGRADES, AND 18" OF PAVEMENT SUBGRADES WITH A LIQUID LIMIT GREATER THAN 45 SHALL BE STABILIZED WITH CLASS C FLY ASH OR CEMENT. THE MODIFIED SOIL IN PAVEMENT AREAS SHOULD EXTEND 1 FOOT BEYOND THE CURB AND GUTTER.
28. IF SOIL MODIFICATION WITH FLY ASH OR CEMENT IS SELECTED, THE FLY ASH AND SOIL SHALL BE THOROUGHLY MIXED WITHIN 1/2 HOUR AFTER INTRODUCTION. FLY ASH MIXING SHOULD NOT BE PERFORMED AT AMBIENT OR SOIL TEMPERATURES BELOW 40° FAHRENHEIT. COMPACTION OF THE FLY ASH SOIL SHALL BE COMPLETED WITHIN TWO HOURS AFTER MIXING.

LEGEND:

	PROPOSED UNDERGROUND POWER
	PROPOSED STORM SEWER
	EXISTING STORM SEWER
	PROPOSED WATER MAIN
	EXISTING WATER MAIN
	PROPOSED SANITARY FORCE MAIN
	EXISTING SANITARY FORCE MAIN
	PROPOSED COMMUNICATIONS
	PROPOSED GAS MAIN
	EXISTING IRRIGATION MAIN
	EXISTING IRRIGATION LATERAL
	LIMITS OF DISTURBANCE



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CONSULTING ENGINEERS, INC.

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VILLAGE OF LOCH LLOYD, CASS COUNTY, MISSOURI

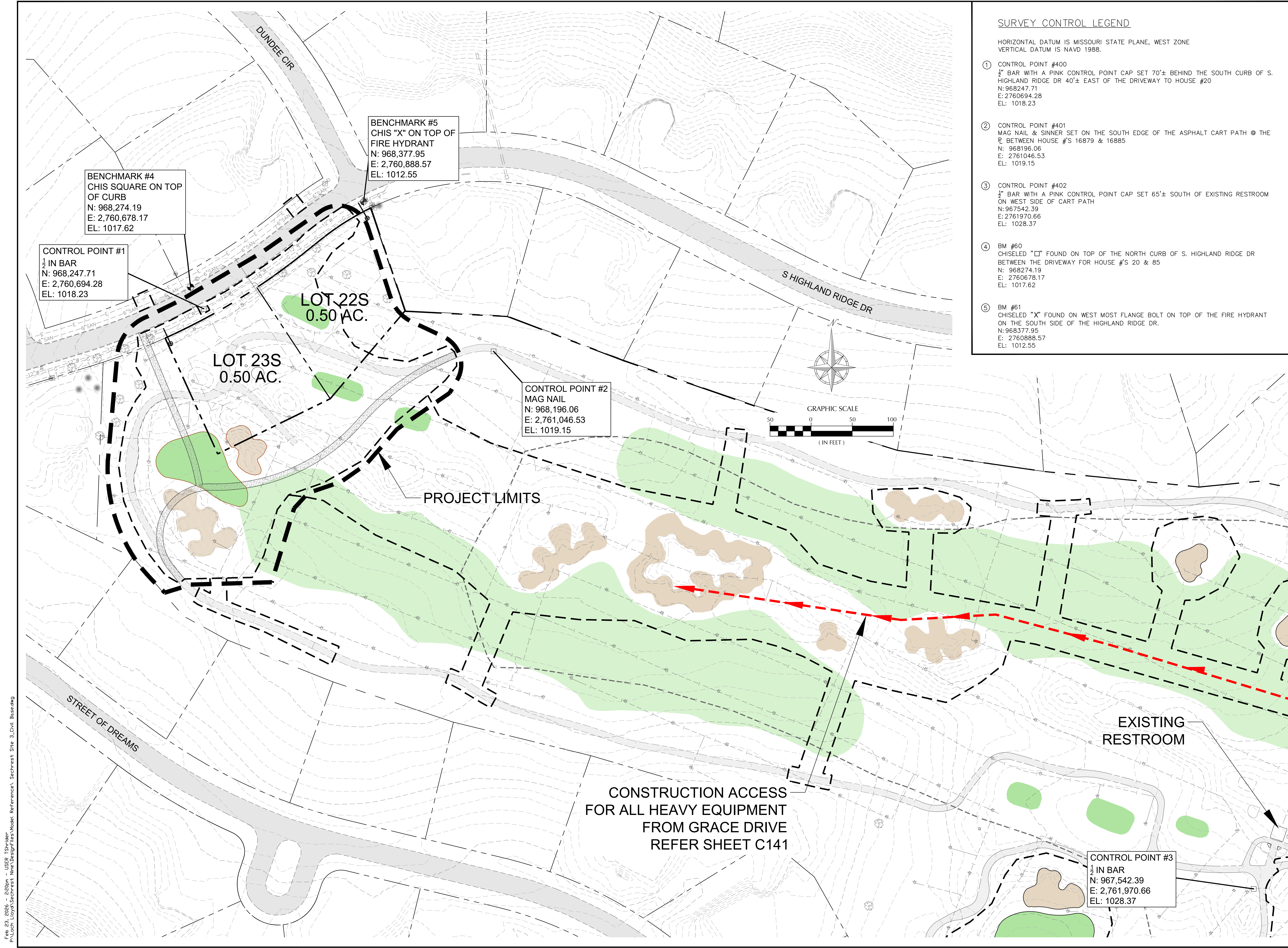
PROJECT NO. _____ LOCH LLOYD
DATE _____ 07 MAR 2025
DRAWN BY _____ TRS
CHECKED BY _____ BHI
CHECKED BY _____

REVISIONS:
1- 4/18/25 WSD COMMENTS
2- 6/5/25 WSD COMMENTS
3- 7/15/25 BID SET

SHEET TITLE & NUMBER
SECHREST
3rd Plat
GENERAL
LAYOUT

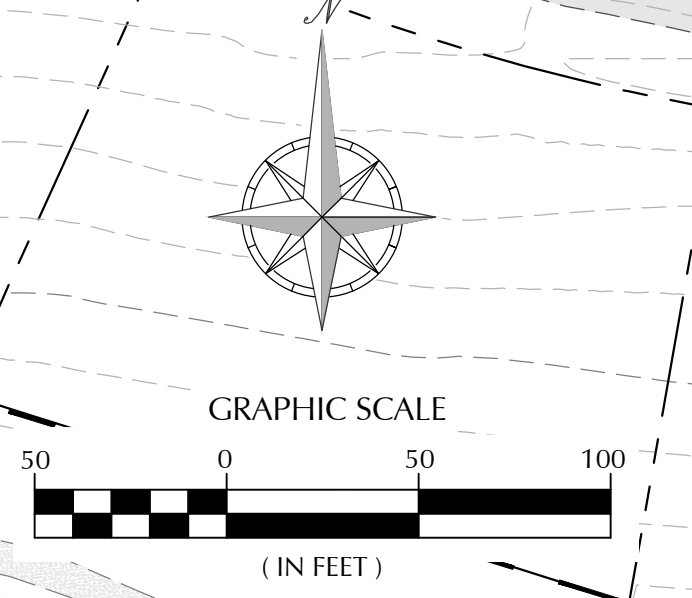
SHEET
C130

Feb 23, 2025 - 2:00pm - USER: TSwinder - P:\Loch_Lloyd\Sechrest - New Design\Files\Model Reference\ Sechrest - Site 3_Civil_Basew.dwg



SURVEY CONTROL LEGEND

- HORIZONTAL DATUM IS MISSOURI STATE PLANE, WEST ZONE
 VERTICAL DATUM IS NAVD 1988.
- ① CONTROL POINT #400
 3/4" BAR WITH A PINK CONTROL POINT CAP SET 70'± BEHIND THE SOUTH CURB OF S. HIGHLAND RIDGE DR 40'± EAST OF THE DRIVEWAY TO HOUSE #20
 N: 968247.71
 E: 2760694.28
 EL: 1018.23
 - ② CONTROL POINT #401
 MAG NAIL & SINNER SET ON THE SOUTH EDGE OF THE ASPHALT CART PATH @ THE R. BETWEEN HOUSE #S 16879 & 16885
 N: 968196.06
 E: 2761046.53
 EL: 1019.15
 - ③ CONTROL POINT #402
 3/4" BAR WITH A PINK CONTROL POINT CAP SET 65'± SOUTH OF EXISTING RESTROOM ON WEST SIDE OF CART PATH
 N: 967542.39
 E: 2761970.66
 EL: 1028.37
 - ④ BM #60
 CHISELED "□" FOUND ON TOP OF THE NORTH CURB OF S. HIGHLAND RIDGE DR BETWEEN THE DRIVEWAY FOR HOUSE #S 20 & 85
 N: 968274.19
 E: 2760678.17
 EL: 1017.62
 - ⑤ BM #61
 CHISELED "X" FOUND ON WEST MOST FLANGE BOLT ON TOP OF THE FIRE HYDRANT ON THE SOUTH SIDE OF THE HIGHLAND RIDGE DR.
 N: 968377.95
 E: 2760888.57
 EL: 1012.55



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LOCH LLOYD
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 VILLAGE OF LOCH LLOYD, CASS COUNTY, MISSOURI

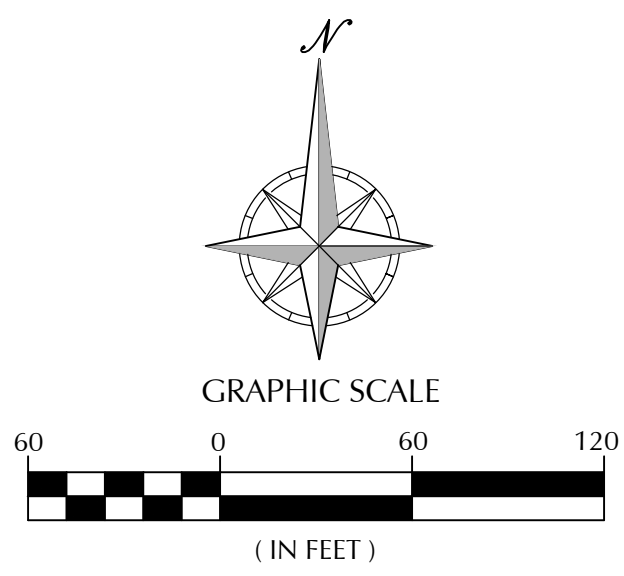
PROJECT NO.	LOCH LLOYD
DATE	07 MAR 2025
DRAWN BY	TS
CHECKED BY	BH
CHECKED BY	

REVISIONS	
1- 4/28/25 WSD COMMENTS	
2- 6/5/25 WSD COMMENTS	
3- 7/15/25 BID SET	
4- 10/03/25 CONTROL UPDATES	

SHEET TITLE & NUMBER
**LOCH LLOYD
 SECHREST 3rd PLAT
 CONSTRUCTION
 ACCESS
 AND CONTROL**

**SHEET
 C131**

Feb 23, 2026 - USER: TSWinder - P:\Loch_Lloyd\Sechrest - New\DesignFiles\Model Reference\ Sechrest_Site_3_Civil_Base.dwg



PHASE 1 LEGEND

- SEDIMENT FENCE (KC APWA DETAIL ESC-10) OR MULCH BERM
- VEHICLE TRACKING CONTROL (KC APWA DETAIL ESC-01)
- DIRECTIONAL FLOW ARROW
- TOPSOIL STOCKPILE, MATERIAL STAGING AND PARKING AREA (COORDINATE TOPSOIL MANAGEMENT WITH OWNER'S REP & ENGINEER)
- LIMITS OF DISTURBANCE
- CONCRETE PATH REMOVAL
- PROPERTY LINE
- RIGHT OF WAY
- ROCK CHECK DAM
- EXISTING VEGETATION TO REMAIN
- EXISTING VEGETATION TO BE REMOVED
- EXISTING TREE TO BE REMOVED

PERIMETER CONTROL

MAINTENANCE

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. ALL CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EACH WEEK AND WITHIN 24 HOURS FOLLOWING ANY STORM EVENT OF 0.5 INCHES OR GREATER.
2. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.
3. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
4. SEDIMENT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
5. THE TEMPORARY CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
6. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.

SEQUENCE OF CONSTRUCTION

NOTE: UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.

CONTRACTOR TO PHASE EROSION CONTROL IN CONJUNCTION WITH PHASING OF CONSTRUCTION.
NOTE: AT A MINIMUM, APWA SECTION 2150 SHALL BE USED FOR GOOD HOUSEKEEPING AND SPILL MEASURES.

GENERAL EROSION CONTROL NOTES

- A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING ("SITE MAP"), THE STANDARD DETAILS, ATTACHMENTS INCLUDED IN SPECIFICATIONS ("SWPPP"), PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORMWATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- D. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- E. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- F. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- G. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- H. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- I. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- J. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- K. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
- L. SHOULD CONSTRUCTION TEMPORARILY CEASE AND WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 14 DAYS, STABILIZATION SHALL BE INITIATED IMMEDIATELY AND COMPLETED WITHIN 14 DAYS.
- M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE STABILIZED. THESE AREAS SHALL BE STABILIZED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. STABILIZATION MAY CONSIST OF SEED AND STRAW MULCH, SOD, ROCK, PAVEMENT, STRUCTURE OR OTHER NON-ERODIBLE COVER.
- N. THE CONTRACTOR SHALL INSPECT EROSION CONTROL DEVICES EVERY 7 DAYS AND WITHIN 24 HOURS OF A STORM OF 0.5 INCHES OR MORE. THE CONTRACTOR SHALL REPAIR DAMAGE, CLEAN OUT SEDIMENT, AND ADD ADDITIONAL EROSION CONTROL DEVICES AS NEEDED, OR AS SOON AS PRACTICABLE AFTER INSPECTION.
- O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. ONLY USE INGRESS/EGRESS LOCATIONS AS PROVIDED.
- P. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
- R. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- S. SLOPES CONSISTING OF TOPSOIL, CLAY, OR SILT SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION AND POLLUTANT DISCHARGE.
- U. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL DEVICES AND REMOVING SEDIMENT UNTIL A MINIMUM OF 70% OF PERMANENT VEGETATION HAS BECOME STABILIZED AND ESTABLISHED. EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE 70% ESTABLISHED VEGETATION IS MET, OR THE DURATION OF THE PROJECT, WHICHEVER IS THE LATER DATE.

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	
TEMPORARY CONSTRUCTION EXITS																									
TEMPORARY CONTROL MEASURES																									
SEDIMENT CONTROL BASINS																									
STRIP & STOCKPILE TOPSOIL																									
ROUGH GRADE																									
STORM FACILITIES																									
SITE CONSTRUCTION																									
PERMANENT CONTROL STRUCTURES																									
FOUNDATION / BUILDING CONSTRUCTION																									
FINISH GRADING																									
LANDSCAPING/SEED/FINAL STABILIZATION																									

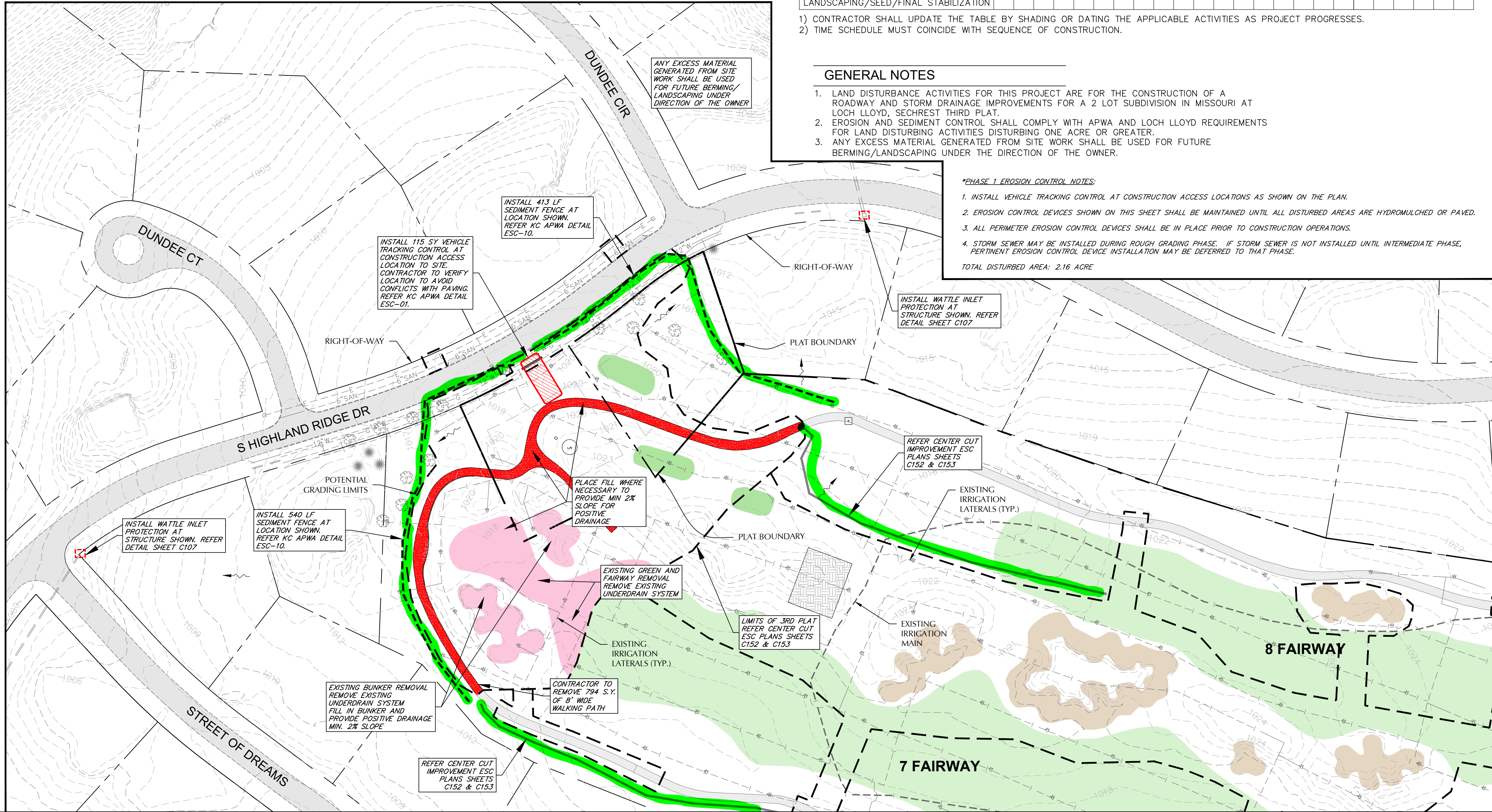
- 1) CONTRACTOR SHALL UPDATE THE TABLE BY SHADING OR DATING THE APPLICABLE ACTIVITIES AS PROJECT PROGRESSES.
- 2) TIME SCHEDULE MUST COINCIDE WITH SEQUENCE OF CONSTRUCTION.

GENERAL NOTES

1. LAND DISTURBANCE ACTIVITIES FOR THIS PROJECT ARE FOR THE CONSTRUCTION OF A ROADWAY AND STORM DRAINAGE IMPROVEMENTS FOR A 2 LOT SUBDIVISION IN MISSOURI AT LOCH LLOYD, SECHREST THIRD PLAT.
2. EROSION AND SEDIMENT CONTROL SHALL COMPLY WITH APWA AND LOCH LLOYD REQUIREMENTS FOR LAND DISTURBING ACTIVITIES DISTURBING ONE ACRE OR GREATER.
3. ANY EXCESS MATERIAL GENERATED FROM SITE WORK SHALL BE USED FOR FUTURE BERMING/LANDSCAPING UNDER THE DIRECTION OF THE OWNER.

***PHASE 1 EROSION CONTROL NOTES:**

1. INSTALL VEHICLE TRACKING CONTROL AT CONSTRUCTION ACCESS LOCATIONS AS SHOWN ON THE PLAN.
 2. EROSION CONTROL DEVICES SHOWN ON THIS SHEET SHALL BE MAINTAINED UNTIL ALL DISTURBED AREAS ARE HYDROMULCHED OR PAVED.
 3. ALL PERIMETER EROSION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO CONSTRUCTION OPERATIONS.
 4. STORM SEWER MAY BE INSTALLED DURING ROUGH GRADING PHASE. IF STORM SEWER IS NOT INSTALLED UNTIL INTERMEDIATE PHASE, PERTINENT EROSION CONTROL DEVICE INSTALLATION MAY BE DEFERRED TO THAT PHASE.
- TOTAL DISTURBED AREA: 2.16 ACRE



9000 STATE LINE ROAD
LEAWOOD, KANSAS 66206
11006 PARALLEL PARKWAY
KANSAS CITY, KANSAS 66109
TEL: (913) 942-6642
FAX: (913) 942-6941
cce@ccengineers.com



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LOCH LLOYD
PLANNED RESIDENTIAL COMMUNITY
VILLAGE OF LOCH LLOYD, CASS COUNTY, MISSOURI

PROJECT NO: LOCH LLOYD
DATE: 07 MAR 2025
DRAWN BY: TS
CHECKED BY: BH

REVISIONS
1- 4/18/25 WSD COMMENTS
2- 6/25/25 WSD COMMENTS
3- 7/15/25 BID SET

SHEET TITLE & NUMBER
SECHREST
3rd PLAT
EROSION CONTROL
PERIMETER CONTROL

SHEET
C132



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VILLAGE OF LOCH LLOYD, CASS COUNTY, MISSOURI

PROJECT NO. LOCH LLOYD
DATE 07 MAR 2025
DRAWN BY TS
CHECKED BY BH
REVISIONS
1- 4/18/25 WSD COMMENTS
2- 6/25/25 WSD COMMENTS
3- 7/15/25 BID SET

SHEET TITLE & NUMBER
**SECHREST
3rd PLAT
EROSION CONTROL
GROUNDCOVER**

**SHEET
C133**

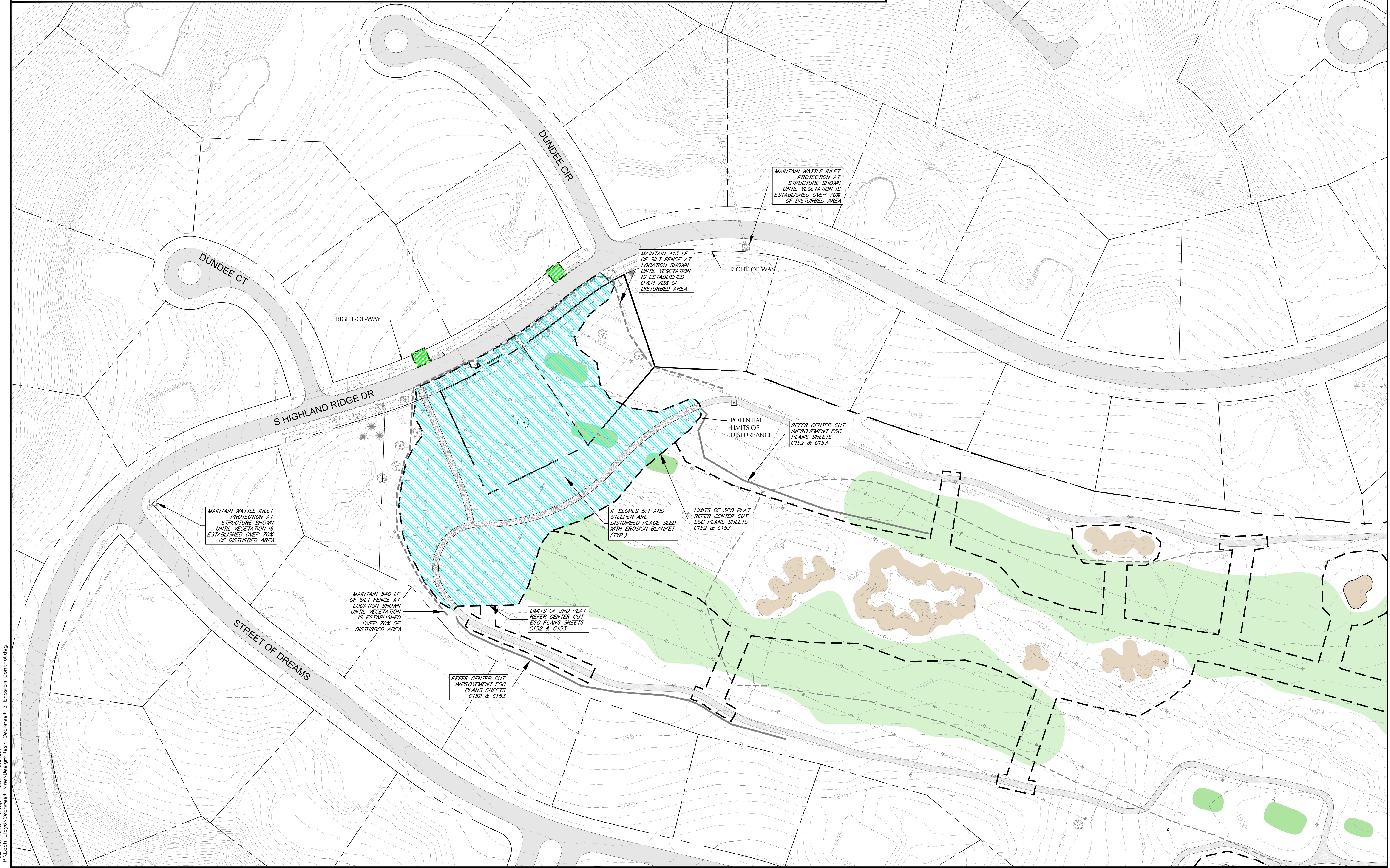
GROUNDCOVER

***GROUNDCOVER EROSION CONTROL NOTES:**
1. EROSION CONTROL DEVICES SHOWN ON THIS SHEET SHALL BE MAINTAINED UNTIL ALL DISTURBED AREAS ARE GRASSED OR PAVED.
2. CONTRACTOR SHALL RESPREAD TOPSOIL (4" MIN.) ON ALL DISTURBED AREA.
TOTAL DISTURBED AREA: 2.16 ACRE

PHASE 3 LEGEND

- MAINTAIN PHASE 1 SEDIMENT FENCE (KC APWA DETAIL ESC-10) OR MULCH BERM
- EXISTING VEGETATION TO REMAIN
- EROSION CONTROL BLANKET WITH SEED (24 MONTH PROTECTION), 4:1 SLOPES OR STEEPER, 0 SY
- SEED WITH HYDROMULCH 2.01 AC
- SOD (AT SERVICE LINE CONNECTION POINTS FOR ESTABLISHED YARDS) 88.9 SY
- MAINTAIN CURB INLET PROTECTION
- DIRECTIONAL FLOW ARROW
- LIMITS OF DISTURBANCE
- PROPERTY LINE
- RIGHT OF WAY
- ROCK CHECK DAM

GRAPHIC SCALE
0 60 120
(IN FEET)



Jul 16, 2025 - 2:13pm - USER: TShirder
P:\Loch Lloyd\Sechrest New\DesignFiles_Schrest 3_Erosion Controlling



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FAX (913) 642-6941
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LOCH LLOYD
PLANNED RESIDENTIAL COMMUNITY
VILLAGE OF LOCH LLOYD, CASS COUNTY, MISSOURI

PROJECT NO. _____ LOCH LLOYD
DATE _____ 23 FEB 2026
DRAWN BY _____ TR
CHECKED BY _____ BH

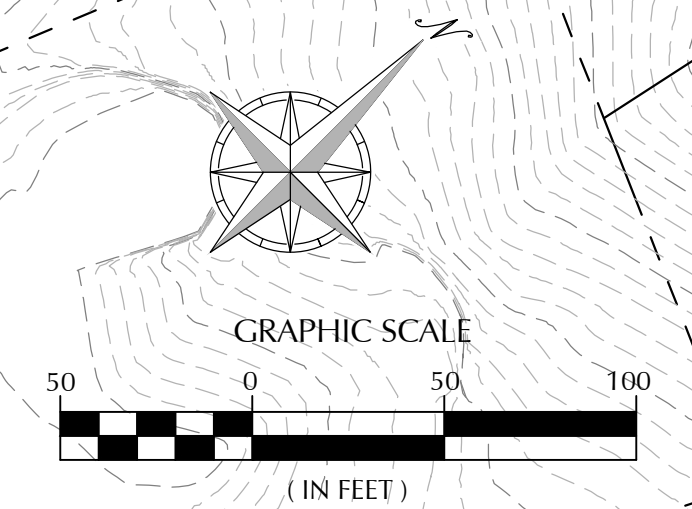
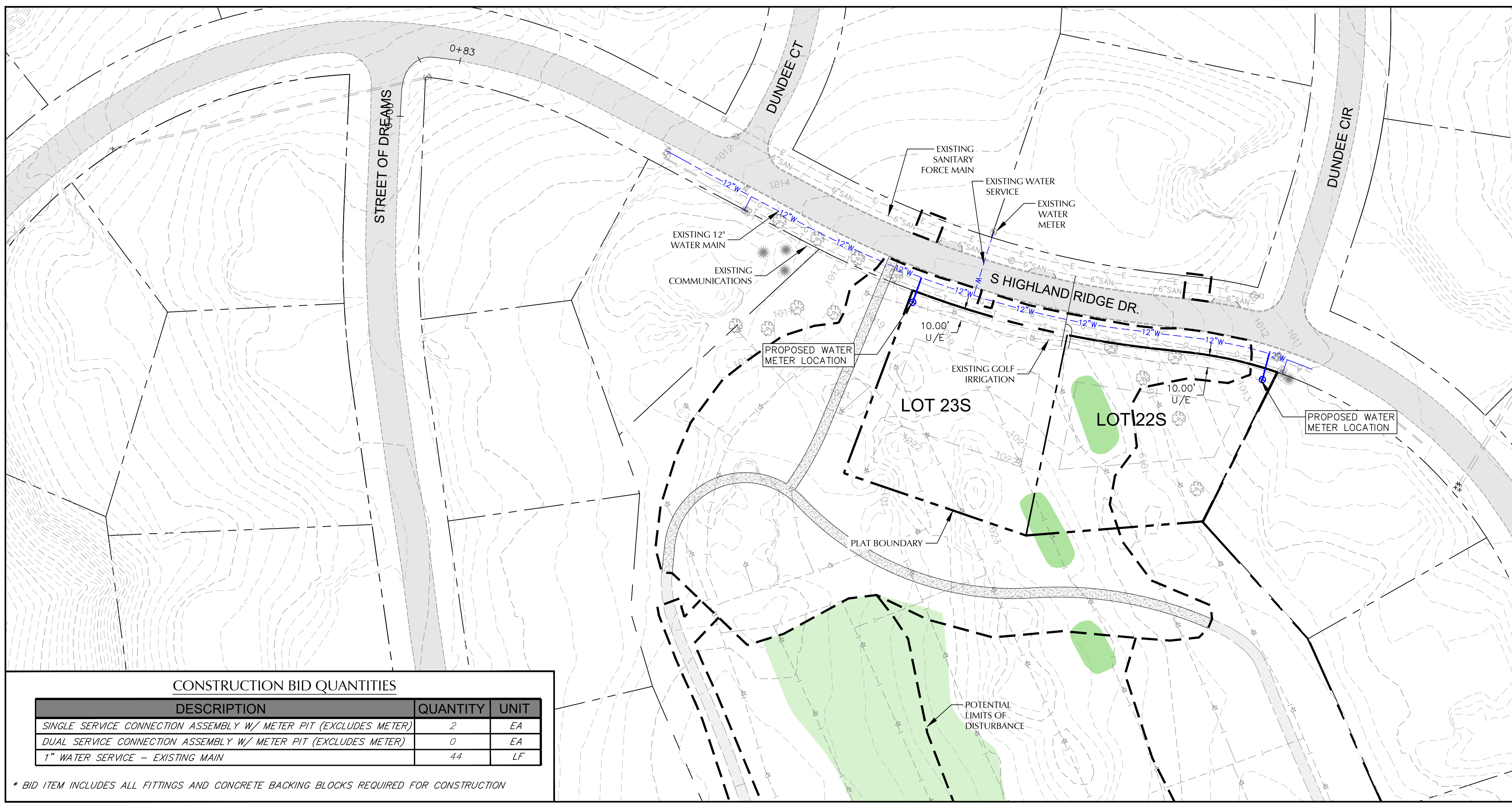
REVISIONS

SHEET TITLE & NUMBER
LOCH LLOYD
SECHREST
3RD PLAT
WATER SERVICE PLAN
AS-BUILT

SHEET
C330

PROPOSED WATER MAIN LEGEND

	EXISTING 12" WATER MAIN		HYDRANT ASSEMBLY
	GATE VALVE		AIR RELEASE
	BEND W/ BACKING BLOCK		BLOWOFF ASSEMBLY
	TEE W/ BACKING BLOCK AND ASSOCIATED VALVES		PLUG W/ BACKING BLOCK
	REDUCER		STRADDLE BLOCK
	SERVICE LINE WITH WATER METER & PIT		



CONSTRUCTION BID QUANTITIES

DESCRIPTION	QUANTITY	UNIT
SINGLE SERVICE CONNECTION ASSEMBLY W/ METER PIT (EXCLUDES METER)	2	EA
DUAL SERVICE CONNECTION ASSEMBLY W/ METER PIT (EXCLUDES METER)	0	EA
1" WATER SERVICE - EXISTING MAIN	44	LF

* BID ITEM INCLUDES ALL FITTINGS AND CONCRETE BACKING BLOCKS REQUIRED FOR CONSTRUCTION

GENERAL NOTES

- The Contractor shall restrict all work and storage of materials to within property lines.
- The Contractor shall be responsible for removal of groundwater as required by conditions of construction.
- Materials encountered during excavation shall be considered "classified". Payment for rock removal shall be based on trench rock unit prices.
- The Contractor shall expose all utilities at pipe crossings to determine conflicts prior to setting structures or laying pipe. Contractor shall provide for temporary shoring and support of all utilities encountered while constructing this project.
- The Contractor shall furnish and install all fittings required to provide proper horizontal and vertical alignment for new water mains, connections to exiting water mains and installation of fire hydrants at the proper location and elevation, whether or not the proper fittings, location or elevations are called out on these drawings, including modification of existing infrastructure required to make all the work conform to current Northwest Cass County Sewer and Water District Standards.
- The Contractor shall furnish and install all temporary blow-off assemblies, fittings, thrust blocking, and restraining devices required for temporary connections for flushing, pressure testing, chlorination, and de-chlorination of the new water mains. Prior to placing new mains in service, the Contractor shall remove any corporation cocks used for testing or chlorination and replace them with tapered brass plugs.
- The Contractor shall install polyethylene encasement on all ductile iron water mains, valves, fittings, and other appurtenances for the full length of ductile iron pipe on the project.
- Scheduling of water main shuts and connection to existing mains shall be at the discretion of Northwest Cass County Water Resource District.
- All fire hydrant branches shall be restrained using approved restraining devices. Hydrants shall be installed so that the centerline of the pumper nozzle is a minimum of eighteen (18)-inches above finish grade, or as recommended by the manufacturer.
- Sections of water main requiring multiple bends, such as cul-de-sacs, should be restrained with approved joint restraining devices and straddle blocks in lieu of backing blocks.
- The locations of existing utilities, as shown, are approximate. It shall be the responsibility of the Contractor to verify the locations and elevations of all existing utilities.
- The Contractor shall notify all utility companies 48 hours prior to the start of construction and verify any utilities that may be encountered.
- Streets and parking areas are to be to grade and curbs in place prior to construction of water mains. Water mains shall be installed with a minimum ground cover of 42 inches below finished grade. Sixteen (16)-inch and larger water mains shall be installed with a minimum ground cover of 48 inches below finished grade.
- Water mains shall be laid at least 10 feet, horizontally from any sewer including storm sewer. When local conditions prevent a horizontal separation of 10 feet, a water main may be laid closer than 10 feet to a sewer, provided that the water main is laid in a separate trench, or on an undisturbed earth shelf located on one side of the sewer, at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer. When possible, water mains shall be laid such that there is a minimum of 10 feet clearance between the pipe wall and the exterior of any manhole and/or inlet on the sewer line.
- Whenever a water main must cross above a sewer including storm sewer, a vertical separation of 18 inches between the bottom of the water main and the top of the sewer shall be maintained. Whenever a water main must cross under a sewer including storm sewer, a vertical separation of 18 inches between the bottom of the sewer and the top of the water main shall be maintained. A full length of water main pipe shall be centered on the sewer to be crossed so that the joints will be equally distant from the sewer and as far away as possible. The 18 inch vertical separation shall be maintained for that portion of the water main located within 10 feet, horizontally, of any sewer it crosses.
- The Contractor shall verify the outside diameter (O.D.) of the existing water main prior to scheduling connection. Provide transition couplings as required.
- The Contractor shall provide locations of valves, manholes, blow offs, meter pits, all appurtenances to engineer for as-built drawings.
- The Contractor shall install marking posts at all valve boxes, manholes, clean outs, blow off, meter pits, all appurtenances to eliminate the risk of damage during home construction.
- All Bends shall be Restrained Joints with C900 (DR-18) PVC PIPE with CERTA-LOK Fittings or C900 (DR-14) PVC PIPE with integral restrained bell.
- The operation of existing valves shall be performed or approved by the District.
- When Restrained Joint Pipe is required contractor shall use CERTA-LOK Fittings or C900 (DR-14) with integral Restrained bell.

SERVICE LINE AND WATER METER PIT INFORMATION FOR EXISTING 12" MAIN

TAP LOCATION	METER LOCATION	LOTS SERVICED	SERVICE LINE BORE LENGTH	SERVICE LINE SIZE
N: 968376.39 E: 2760882.74 N: 968376.41 E: 2760882.18	N: 968356.91 E: 2760892.72 N: 968357.90 E: 2760892.96	22S	22.0 LF 21.4 LF	1"
N: 968224.37 E: 2760645.43 N: 968223.94 E: 2760645.20	N: 968204.27 E: 2760654.17 N: 968205.49 E: 2760653.90	23S	22.0 LF 20.4 LF	1"

Feb 23, 2026 - USER: TSWinder, P:\Loch_Lloyd\Sechrest_New_Line\Drawings - Sechrest_3_Vis\termain_Ap-Built.dwg



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KANSAS CITY, KANSAS 66109
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PLANNED RESIDENTIAL COMMUNITY
VILLAGE OF LOCH LLOYD, CASS COUNTY, MISSOURI

PROJECT NO. LOCH LLOYD
DATE 23 FEB 2026
DRAWN BY TS
CHECKED BY BH

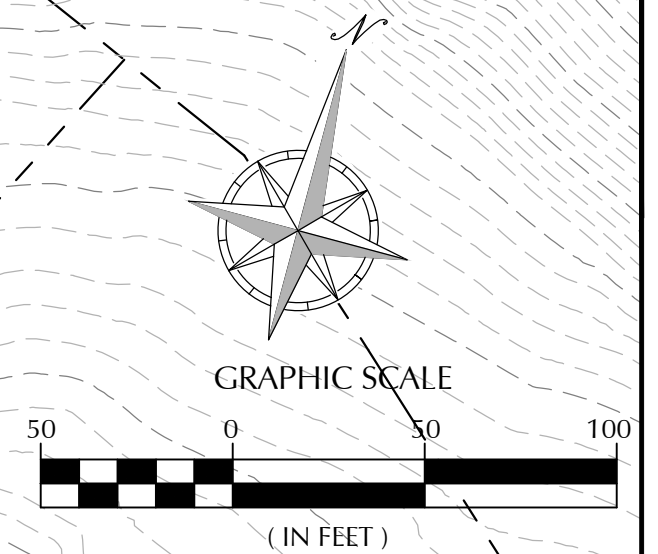
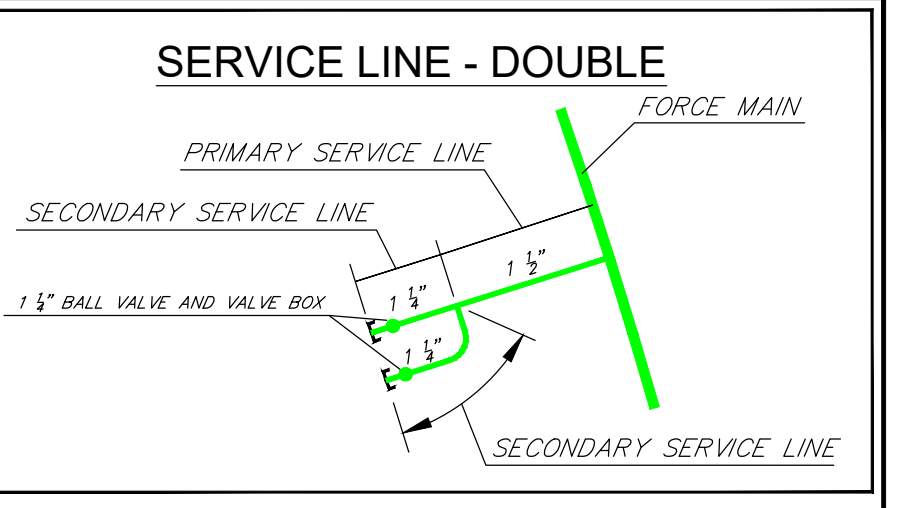
REVISIONS

SHEET TITLE & NUMBER
LOCH LLOYD
SECHREST
3RD PLAT
SANITARY PLAN
AS-BUILTS

**SHEET
C430**



NOTE: END ALL SANITARY SEWER SERVICE LINES WITHIN 3'-5' OF PROPERTY LINE FIELD VERIFY UNLESS OTHERWISE NOTED

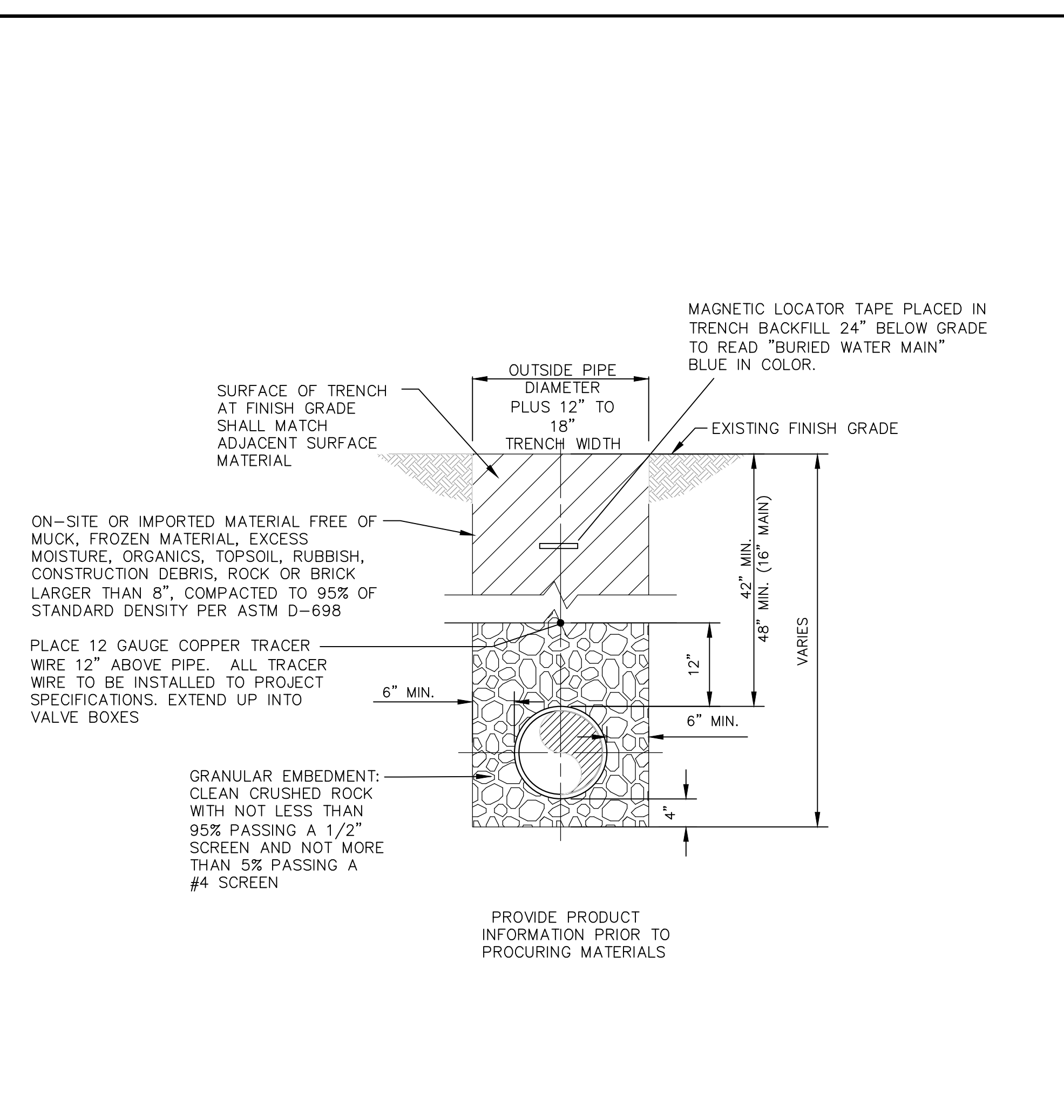


TAP LOCATION		PRIMARY SERVICE LINE		SECONDARY SERVICE LINE		VALVE BOX LOCATION		LOT SERVED
NORTHING	EASTING	LENGTH	SIZE OF PIPE	LENGTH	SIZE OF PIPE	NORTHING	EASTING	
968311.32	2760730.37	39 LF	1 1/2" DR11 HDPE	18 LF	1 1/4" DR11 HDPE	968263.66	2760761.78	23S
968309.36	2760732.32	37 LF	1 1/2" DR11 HDPE			968262.97	2760762.92	
968276.87	2760751.76	N/A	N/A	22 LF	1 1/4" DR11 HDPE	968266.96	2760766.76	22S
968278.52	2760752.66			21 LF	1 1/4" DR11 HDPE	968266.15	2760766.93	

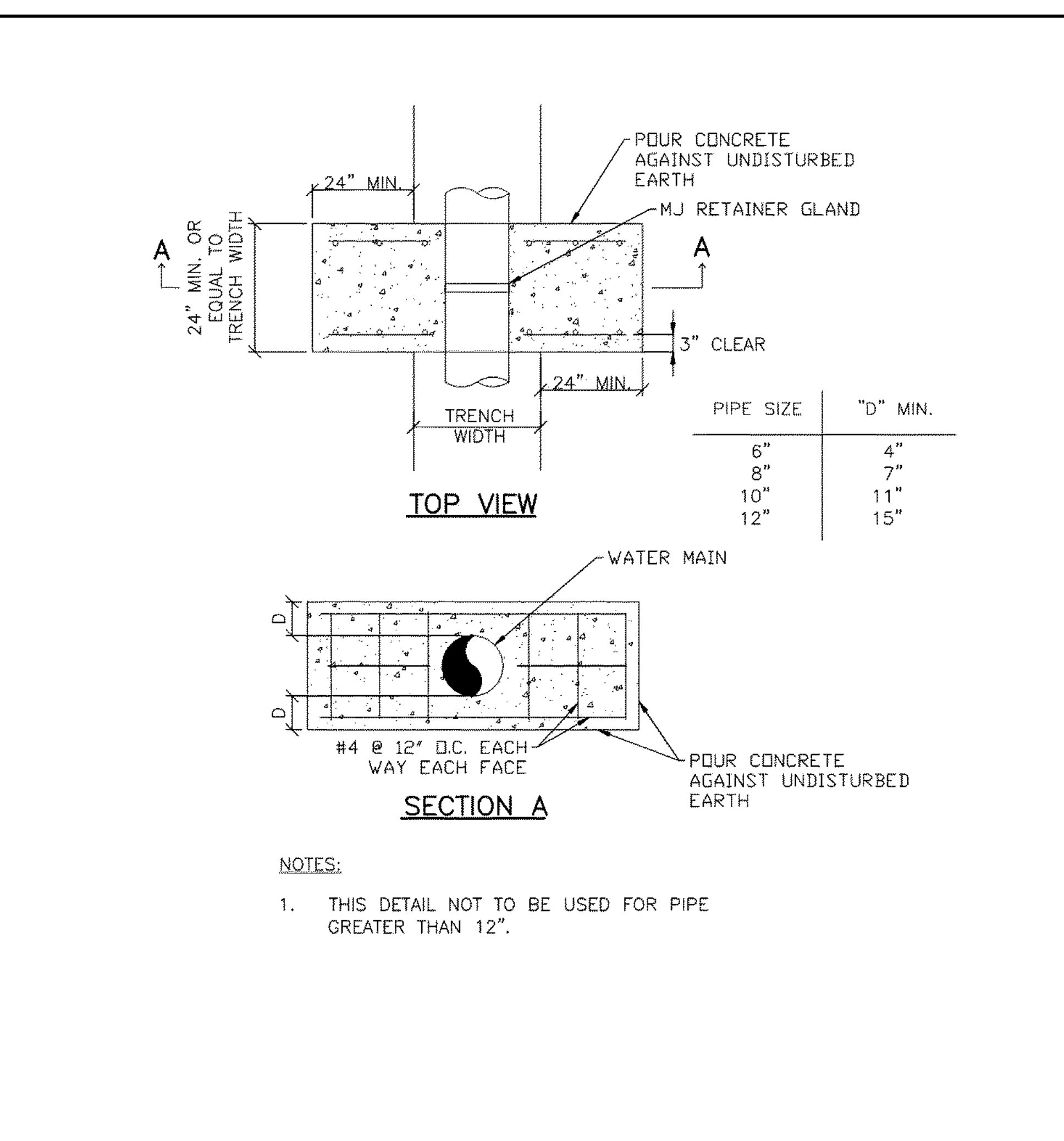
ITEM	DESCRIPTION	QUANTITY	UNIT
1.01	1 1/2" IPS DR 11 PE4710 BUTT FUSED HDPE PIPE *	40	LF
1.02	1 1/2" IPS DR 11 PE4710 BUTT FUSED HDPE PIPE *	39	LF
1.03	BALL VALVE W/ HDPE STUB AND CAP (SERVICE CONNECTION)	3	EA

* BID ITEM INCLUDES ALL FITTINGS AND CONCRETE BACKING BLOCKS REQUIRED FOR CONSTRUCTION

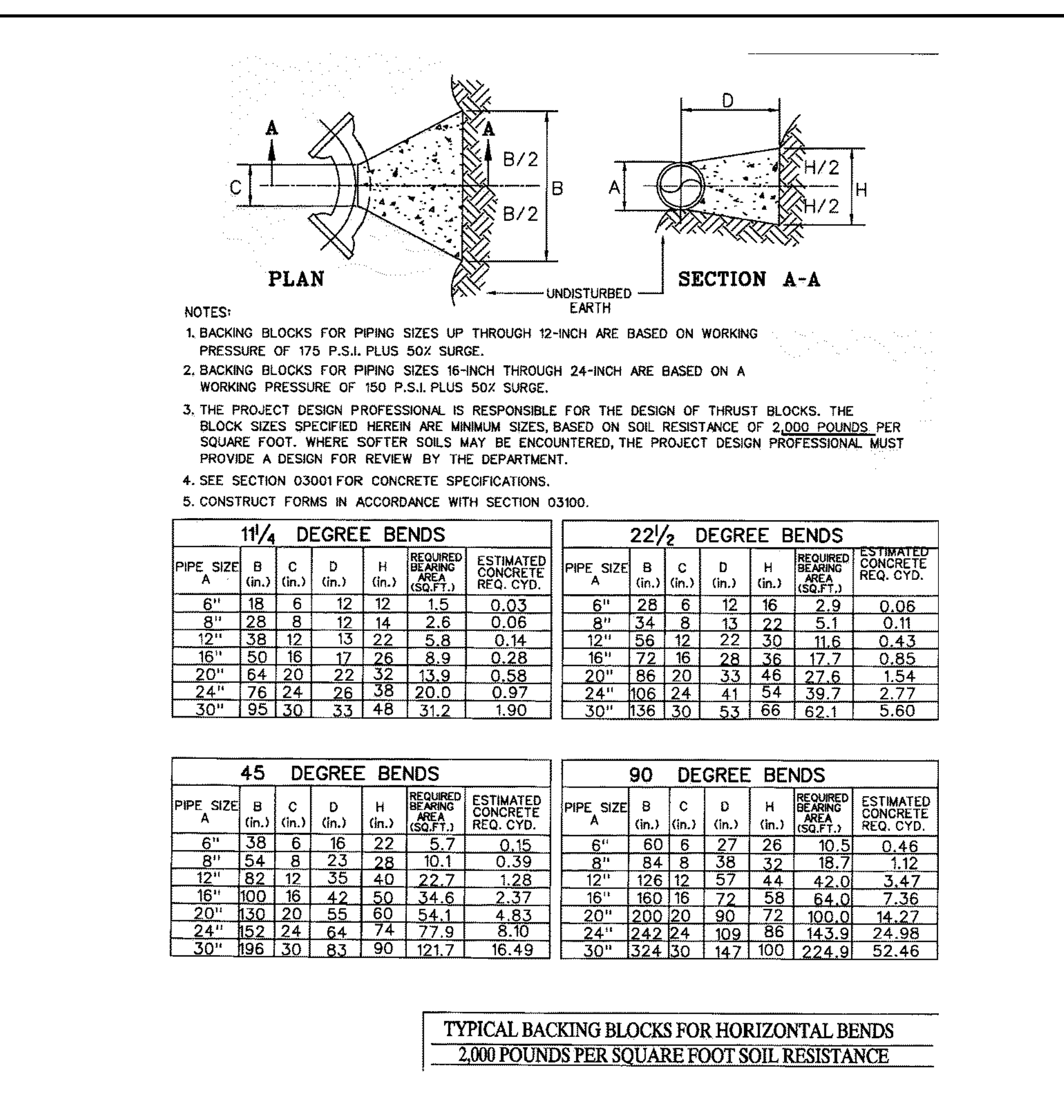
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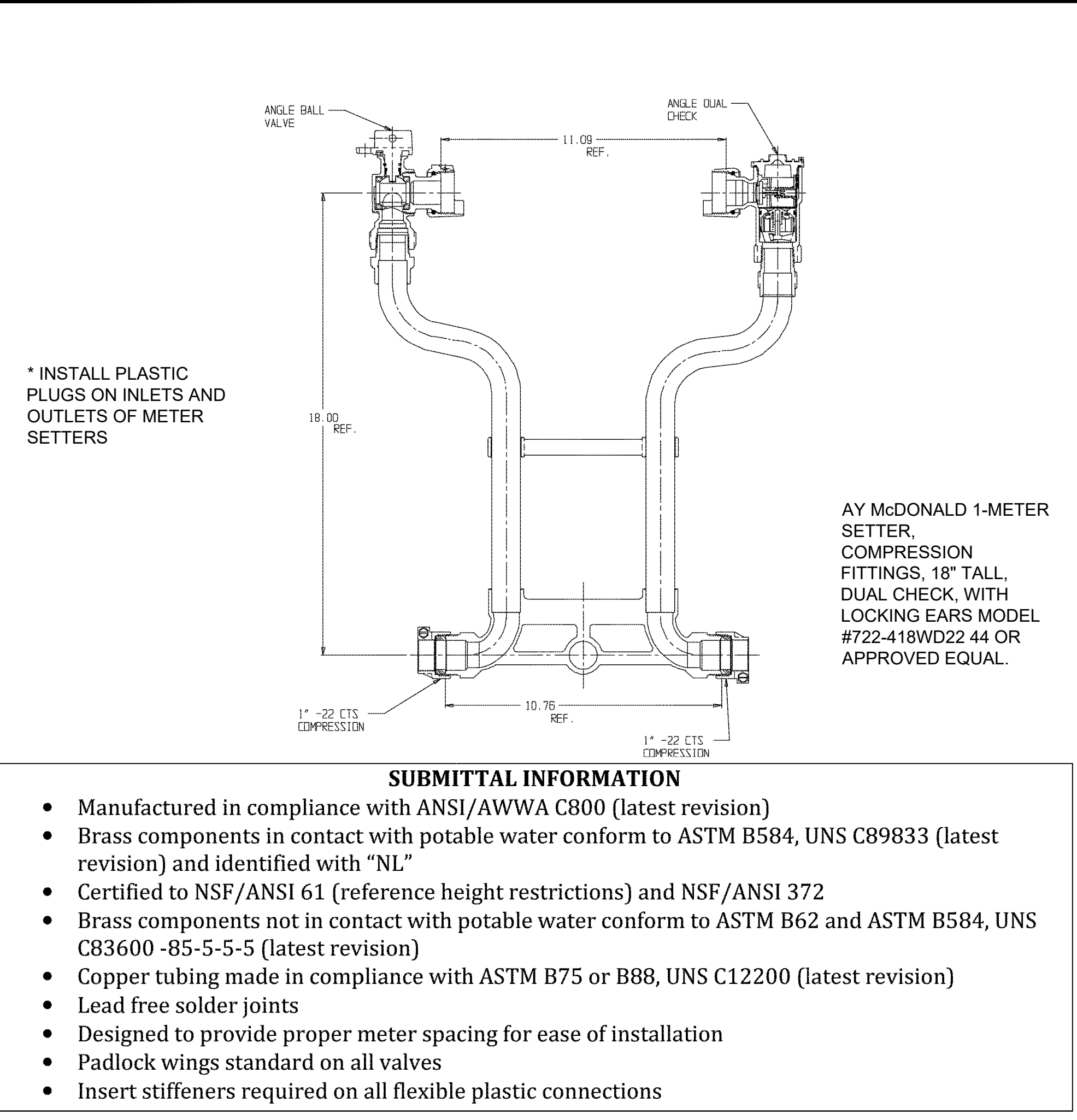
EMBEDMENT AND BACKFILL DETAIL



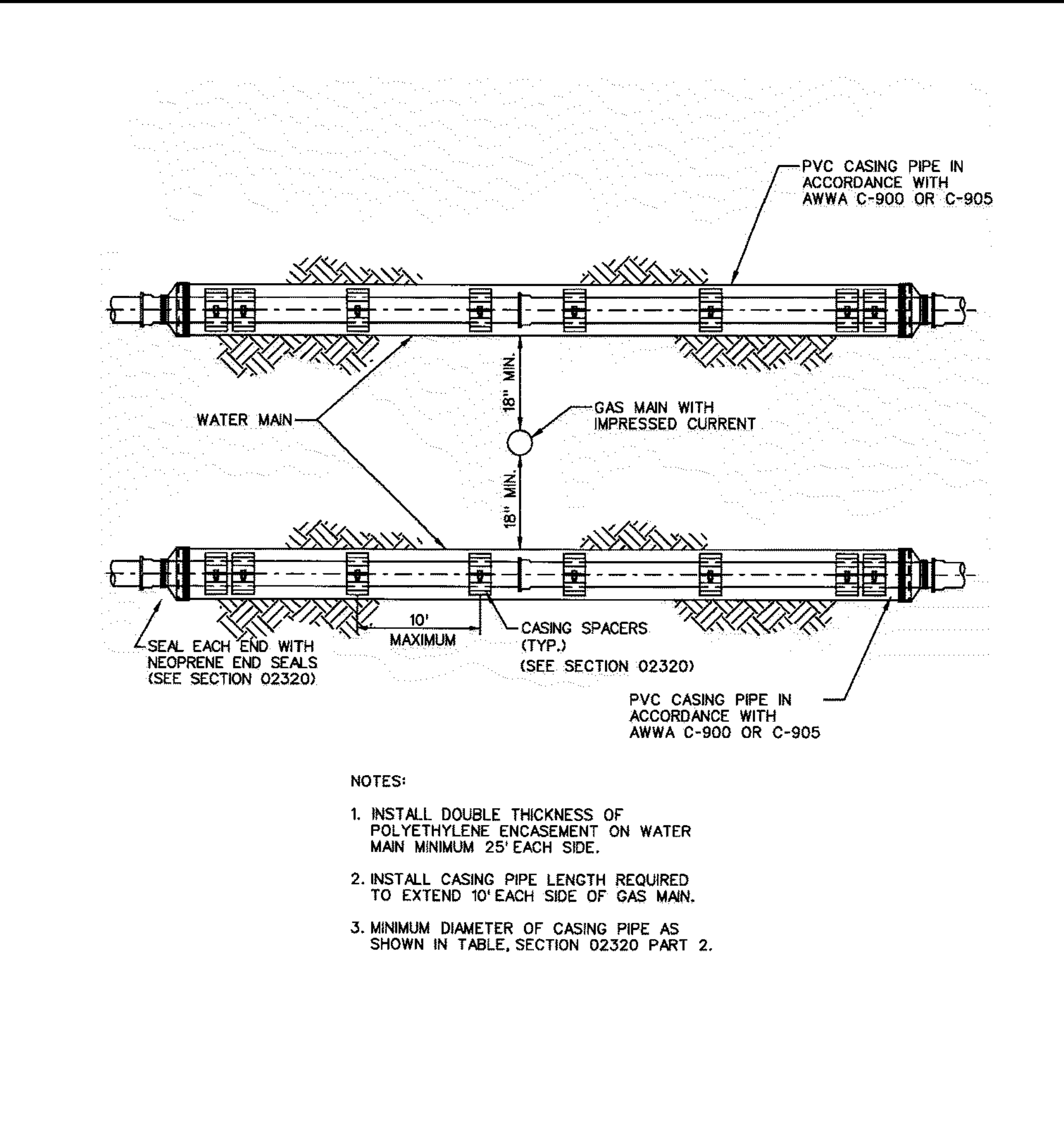
TYPICAL STRADDLE BLOCK FOR 6 & 8 INCH PIPE (FOR REFERENCE)



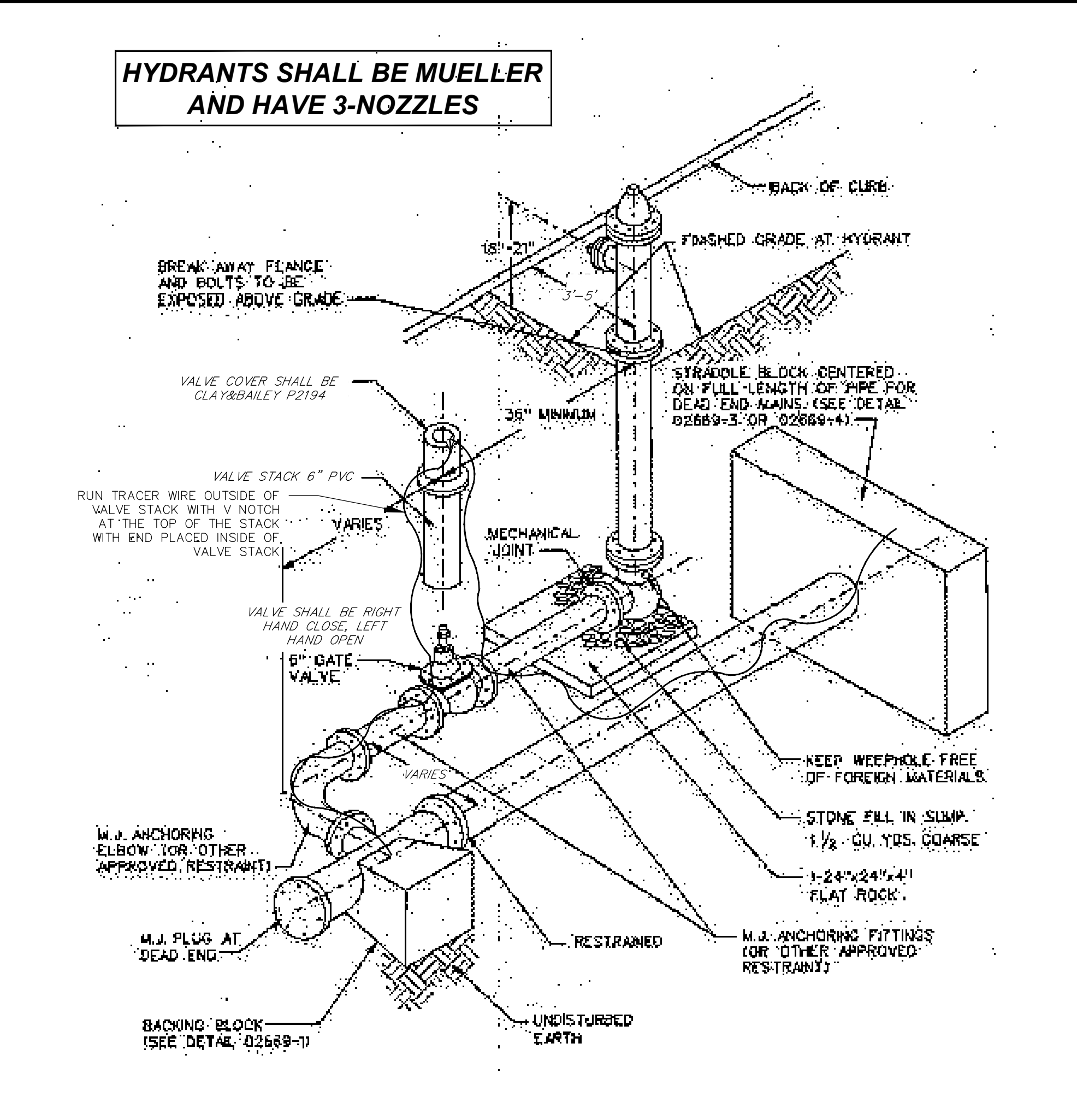
TYPICAL BACKING BLOCKS FOR HORIZONTAL BENDS



1-INCH METER SETTER



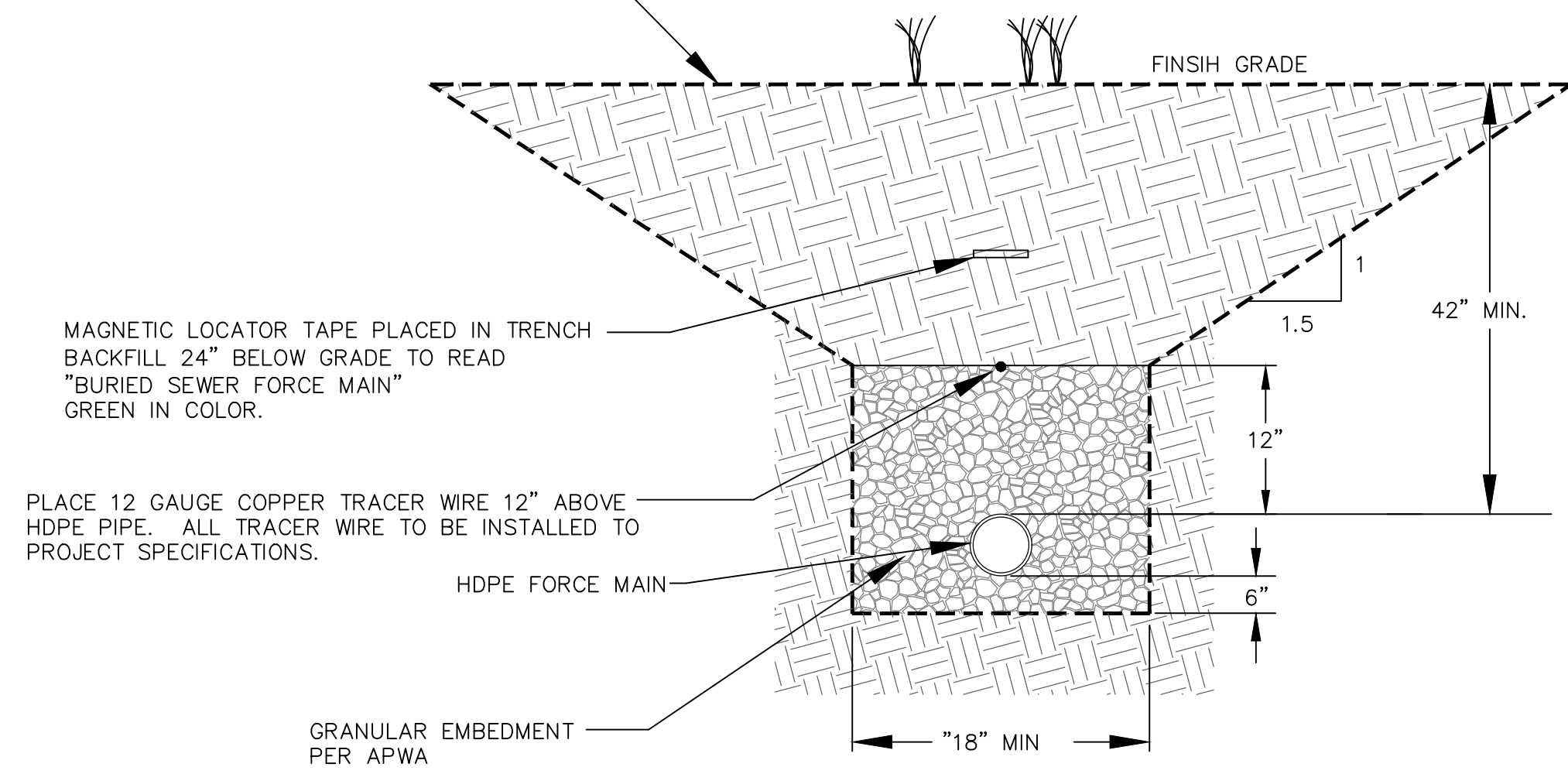
GAS/WATER MAIN CROSSING DETAIL (FOR REFERENCE)



TYPICAL HYDRANT INSTALLATION WITH 90 DEGREE BEND (FOR REFERENCE)

Jul 15, 2025 - 4:33pm - USER T3wilder - P:\Loch Lloyds\Sechrest New\DesignFiles_Schrest L\Watermain.dwg

BACKFILL SHALL BE COMPACTED TO 92% ASTM D698 MAXIMUM DENSITY AT 0 TO 4% ABOVE OPT.



TYPICAL TRENCH SECTION
SCALE: NTS

BACKFILL WITH FLOWABLE FILL UNDER ROADWAY OR COMPACTED AB3 TESTED BY GEOTECH -COMPACTED TO 95% ASTM D698 MAX DENSITY @ OPTIMUM MOISTURE

PLACE 12 GAUGE COPPER TRACER WIRE 12" ABOVE HDPE PIPE. ALL TRACER WIRE TO BE INSTALLED TO PROJECT SPECIFICATIONS.

GRANULAR EMBEDMENT PER APWA

TYPICAL TRENCH SECTION UNDER ROADWAY
SCALE: NTS

2" ARI MODEL D-025, REINFORCED NYLON BODY, BASE AND SEAL PLUG ASSEMBLY, WITH BUNA-N O-RINGS AND CAM LOCK CONNECTION
2" CEPEX PP BALL VALVE 200 PSI RATED. CONTACT CES INDUSTRIAL PIPING SUPPLY. 816-322-4084
2" x 2" ELECTRO-FUSION SADDLE
2" POLY-CAM STAINLESS STEEL NIPPLE
2" HDPE
ELECTROFUSE SADDLE TO 2" HDPE

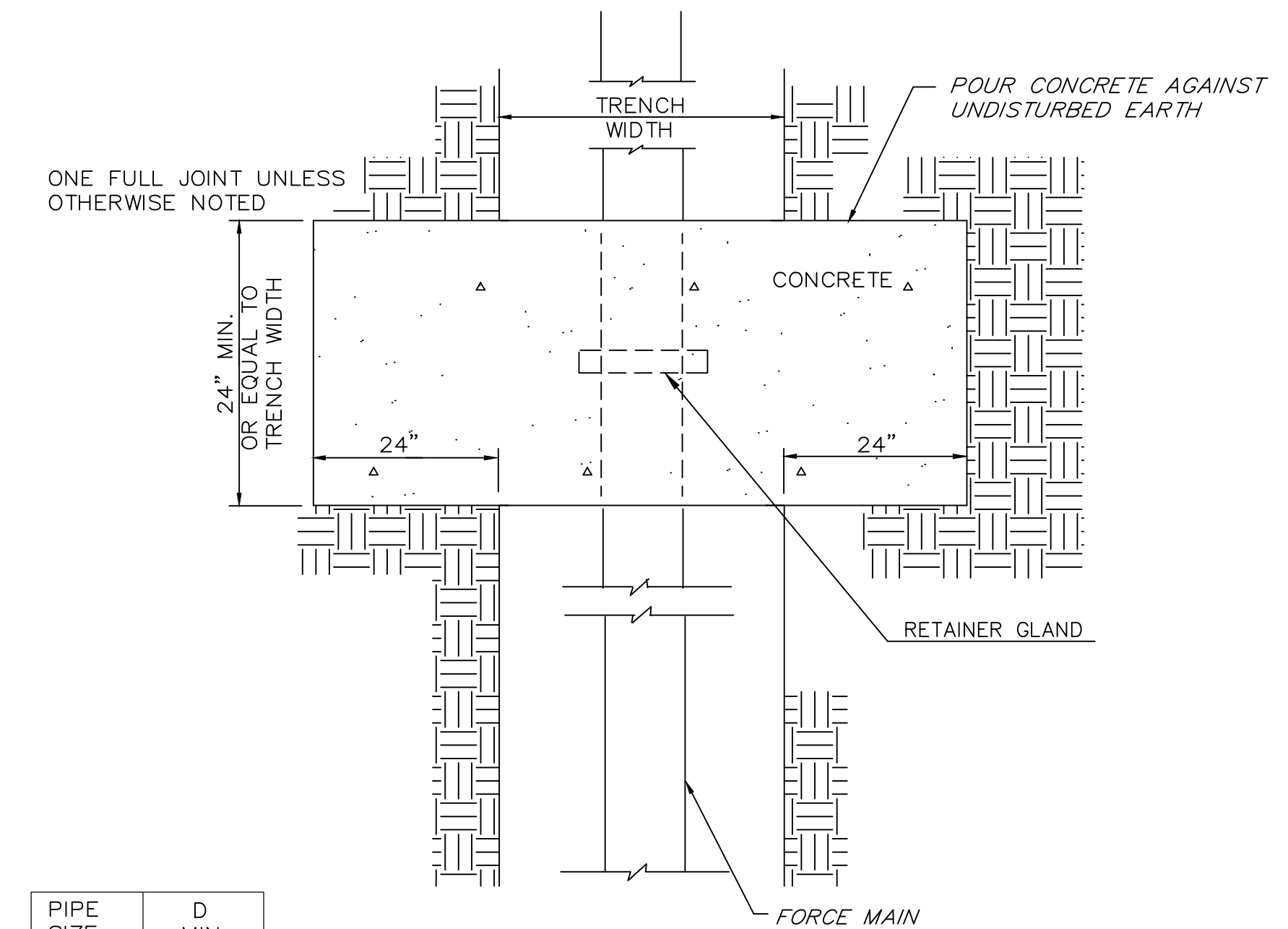
AIR RELEASE & VACUUM LOCK VALVE ASSEMBLY FOR FORCE MAIN
(N.T.S.)



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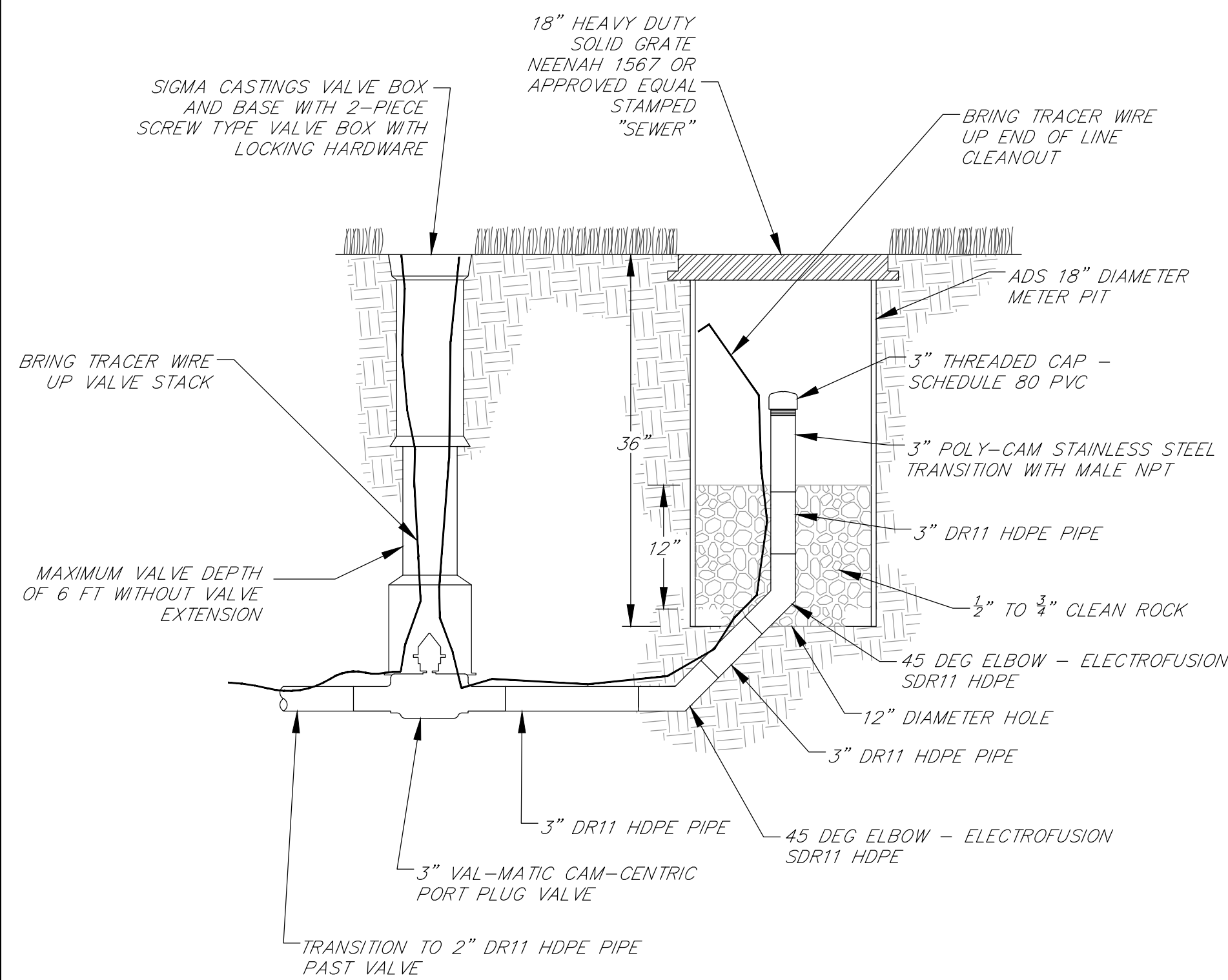


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PIPE SIZE	D MIN.
6"	4"
8"	7"
12"	15"
16"	21"

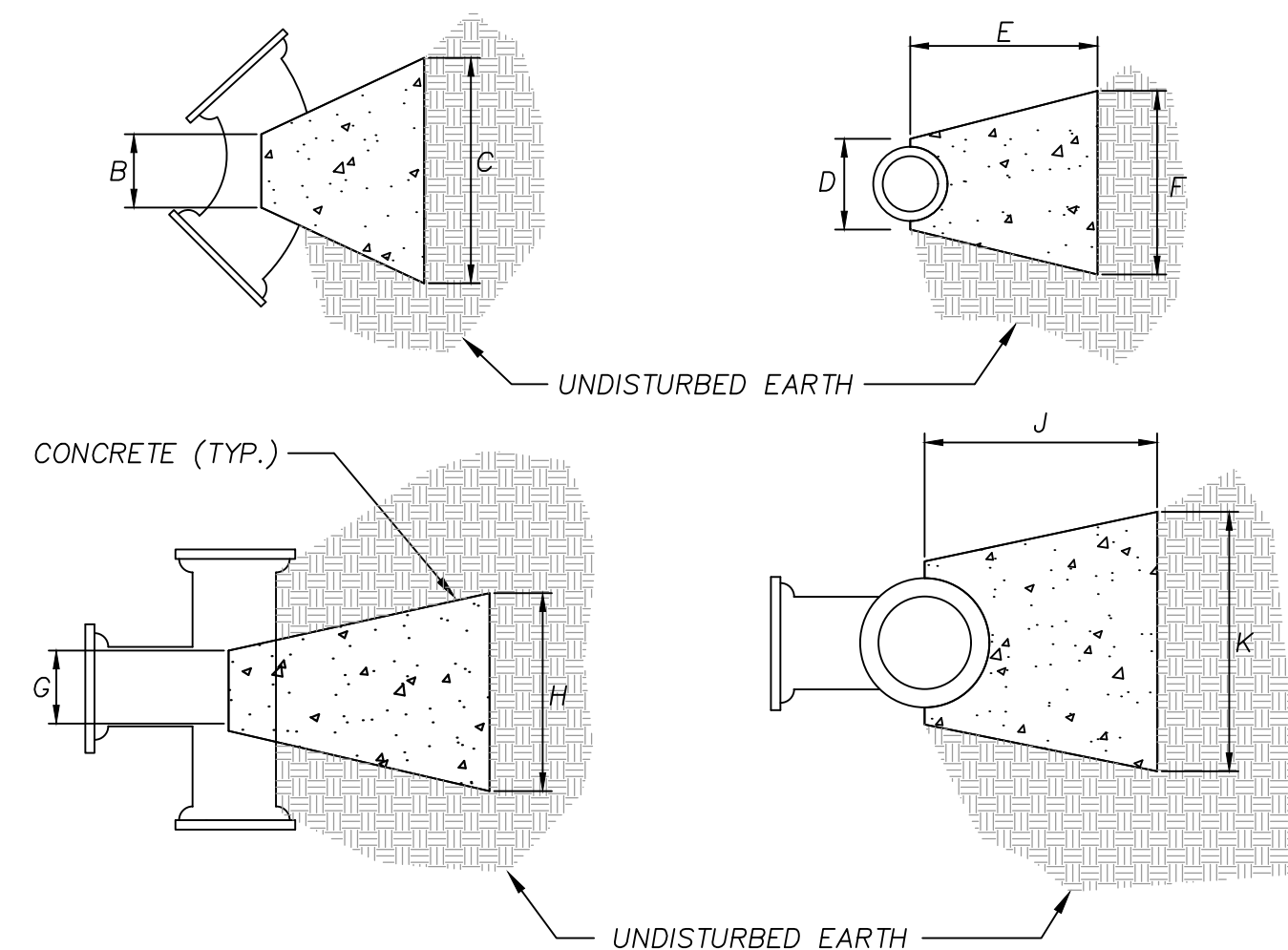
STRADDLE BLOCK DETAIL (FOR REFERENCE)
SCALE: NTS



END OF LINE CLEANOUT/FLUSH VALVE

BENDS						BENDS					
B	C	D	E	F		B	C	D	E	F	
6"	11 1/4 DEG.	8"	15" 12"	24" 12"	6"	45 DEG.	8"	30" 12"	24" 14"		
6"	22 1/2 DEG.	8"	19" 12"	24" 13"	6"	90 DEG.	8"	30" 12"	24" 22"		
8"	11 1/4 DEG.	8"	20" 12"	24" 12"	8"	45 DEG.	8"	30" 12"	24" 24"		
8"	22 1/2 DEG.	8"	22" 12"	24" 17"	8"	90 DEG.	8"	38" 12"	24" 36"		
12"	11 1/4 DEG.	8"	30" 12"	24" 15"	12"	45 DEG.	8"	40" 12"	24" 40"		
12"	22 1/2 DEG.	8"	35" 12"	24" 25"	12"	90 DEG.	8"	60" 12"	24" 52"		

TEES				TEES			
G	H	J	K	G	H	J	K
6" X 6" X 6"	12"	24"	24" 18"	12" X 12" X 6"	12"	24"	24" 18"
8" X 8" X 6"	12"	24"	24" 18"	12" X 12" X 8"	12"	24"	24" 24"
8" X 8" X 8"	12"	24"	24" 24"	12" X 12" X 12"	12"	36"	24" 36"



- ALL BLOCKING SHALL BE FORMED.
- TAPPING SLEEVES TO BE BLOCKED SAME AS TEES.
- SMALL FITTINGS REQUIRE 6" BLOCKING.
- DESIGNED FOR 150 PSI & 2000 LB/SQ. FT. BEARING STRENGTH.

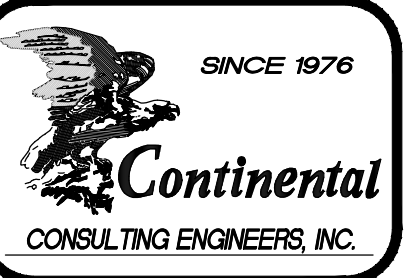
CONCRETE THRUST BLOCKING DETAIL (FOR REFERENCE)

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PLANNED RESIDENTIAL COMMUNITY
VILLAGE OF LOCH LOYD, CASS COUNTY, MISSOURI

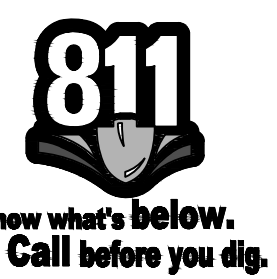
PROJECT NO. _____ LOCH LOYD
DATE _____ OF MAR 2025
DRAWN BY _____ TRS
CHECKED BY _____ BH
REVISIONS
1- 4/18/25 WSD COMMENTS
2- 6/25/25 WSD COMMENTS
3- 7/15/25 BID SET
SHEET TITLE & NUMBER

SECHREST
SANITARY SEWER
DETAILS

SHEET C520



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11006 PARALLEL PARKWAY
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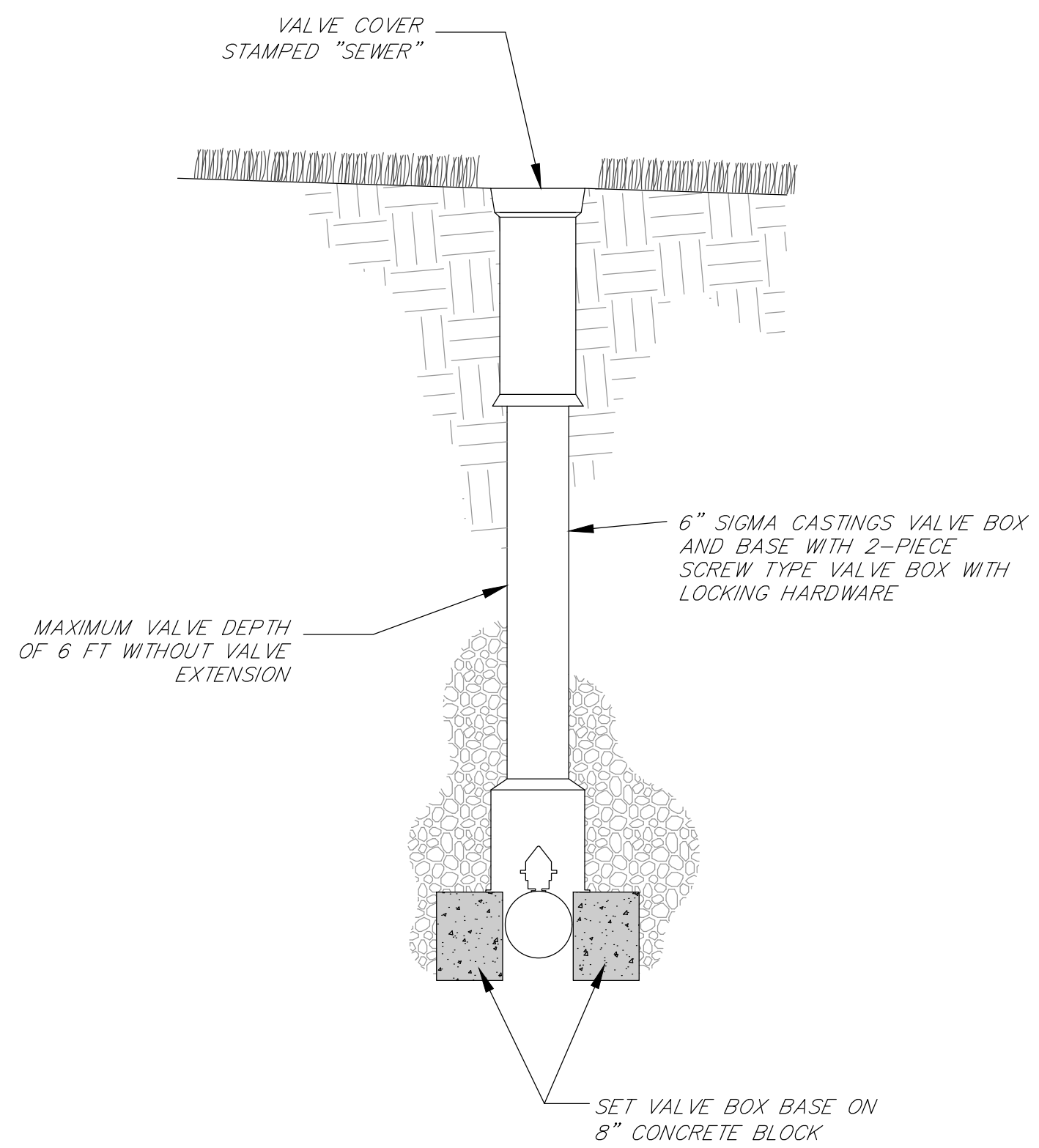
LOCH LOYD
PLANNED RESIDENTIAL COMMUNITY
VILLAGE OF LOCH LOYD, CASS COUNTY, MISSOURI

PROJECT NO.	LOCH LOYD
DATE	07 MAR 2025
DRAWN BY	TS
CHECKED BY	BH
REVISIONS	
1-4/18/25 WSD COMMENTS	
2-6/25/25 WSD COMMENTS	
3-7/15/25 BID SET	
SHEET TITLE & NUMBER	

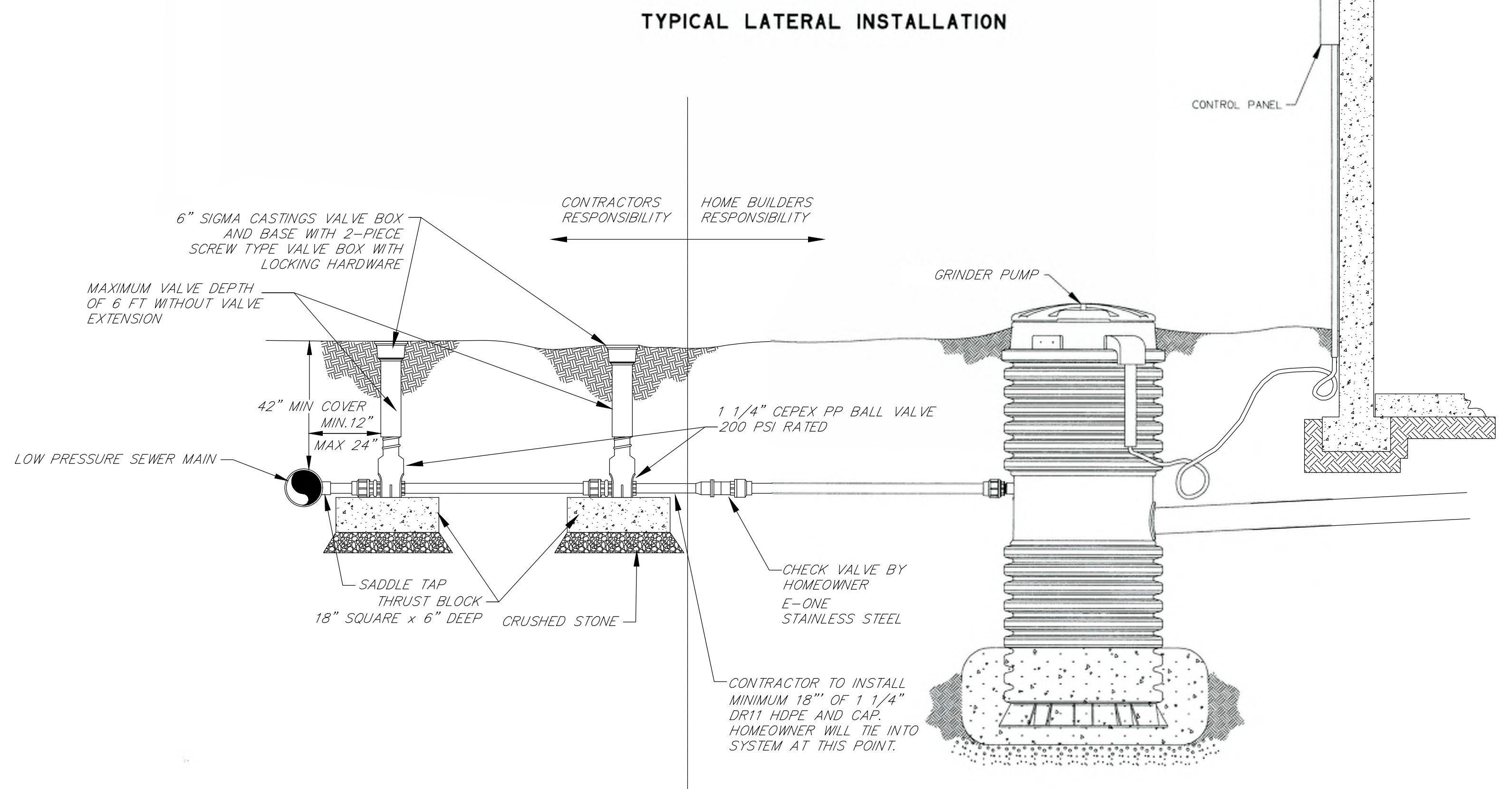
SECHREST
SANITARY SEWER
DETAILS

**SHEET
C521**

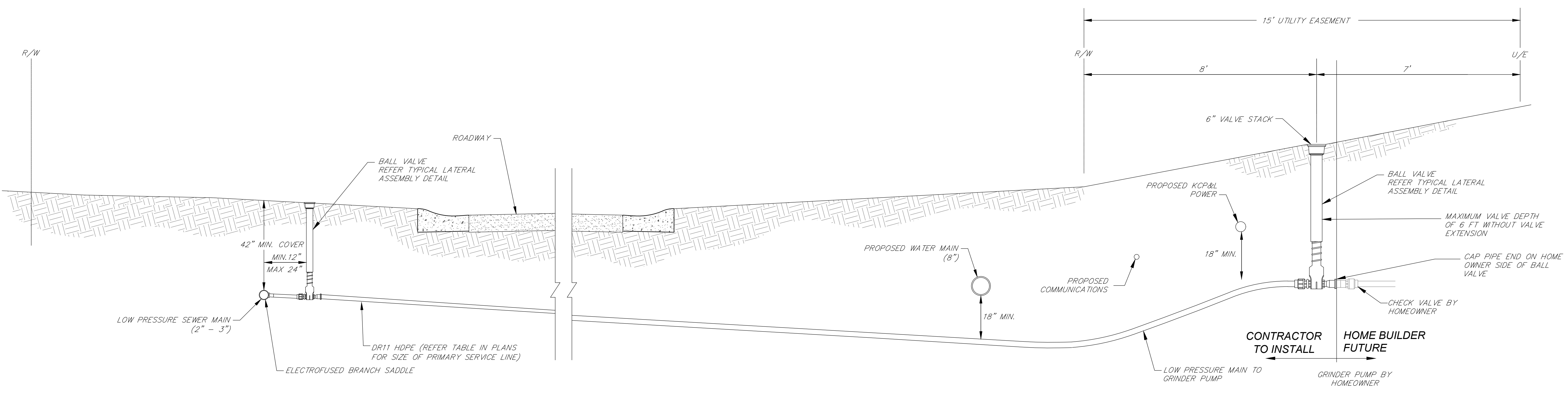
SCALE: NTS



VALVE BOX BASE DETAIL (ON SERVICE LINE)
SCALE: NTS



TYPICAL LATERAL ASSEMBLY
SCALE: NTS



TYPICAL SECTION LPS SERVICE LINE

**ALL FITTINGS FOR HDPE
SERVICE LINE SHALL BE
ELECTROFUSED OR BUTT
WELDED JOINTS**

Jul 15, 2025 - 4:06pm - USER: TShirder
P:\Loch_Lloyd\Secrest_Note\DesignFiles_Secrest_L_Sanitary.dwg