

GENERAL NOTES

1. DEVELOPER* SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES AT LEAST 24 HOURS PRIOR TO ANY CONSTRUCTION OR EXCAVATION. DURING CONSTRUCTION, ALL UTILITIES SHALL BE ADEQUATELY SUPPORTED TO MINIMIZE DAMAGE.
2. DEVELOPER SHALL SUBMIT A REQUEST FOR SERVICE. UPON VERIFICATION OF SERVICEABILITY, DEVELOPER SHALL SUBMIT A PLAN FOR SEWER SERVICE TO THE PROPERTY. LOCATION OF SEWER SERVICE TO THE PROPERTY IS DEPENDENT ON SEVERAL FACTORS, INCLUDING BUT NOT LIMITED TO:
- NUMBER OF EQUIVALENT DWELLING UNITS (EDUs) IN THE DEVELOPMENT, WHERE 1 EDU = 310 GALLONS PER DAY.
 - AGE AND CONDITION OF CONNECTING SEWER.
 - PLANNED LOCATION OF SEWER SERVICE BASED ON UTILITY'S MASTER PLAN OR PREVIOUSLY INSTALLED SEWERS.
3. WHEN AN ITEM PERMIT SUBMITTAL IS REQUIRED (GENERALLY FOR ANY NEW SEWER MAIN), INCLUDE AMERICAN SUBURBAN UTILITIES AS A POTENTIALLY AFFECTED PARTY ON THE PERMIT APPLICATION MATERIALS.
4. ALL CLEAR WATER DISCHARGES (SUCH AS HVAC, ROOF & FOUNDATION DRAINS, ETC.) SHALL BE TO STORM SEWER OR OTHER APPROPRIATE LOCATION. NO CLEAR WATER SHALL DISCHARGE TO SANITARY SEWER.
5. DEVELOPER SHALL SUPPLY TO THE UTILITY (AMERICAN SUBURBAN UTILITIES) ALL EASEMENTS NECESSARY TO PROVIDE SANITARY SEWER SERVICE AT NO COST TO THE UTILITY. ALL EASEMENT DOCUMENTS SHALL BE SUBMITTED TO AND APPROVED BY THE UTILITY PRIOR TO THE APPROVAL OF PLANS BY THE UTILITY. EASEMENTS AND SEWER SHALL ALSO BE PROVIDED ON THE DEVELOPER'S PROPERTY IN ORDER TO SERVE ADJOINING PROPERTIES OR FUTURE SEWER EXTENSIONS AS DETERMINED BY THE UTILITY. IN GENERAL, FOR DEPTHS UP TO 20 FEET, SEWERS SHOULD BE LOCATED IN EASEMENTS THAT ARE TWICE AS WIDE AS THE SEWER DEPTH (20 MIN. WIDTH) AND CONSTRUCTION EASEMENTS OF THE SAME WIDTH SHOULD ALSO, GENERALLY, BE PROVIDED ON ONE SIDE OF THE SEWER EASEMENT. FOR DEPTHS OVER 20', SEWERS SHOULD BE LOCATED IN A 40' EASEMENT AND CONSTRUCTION EASEMENTS SHOULD, GENERALLY, BE PROVIDED ON ONE SIDE OF THE SEWER EASEMENT SUCH THAT THE TOTAL EASEMENT WIDTH IS FOUR TIMES AS WIDE AS THE SEWER DEPTH. CONSTRUCTION EASEMENTS AT MANHOLES TO BE PROVIDED AT MINIMUM 30 FEET (FOR UP TO 20' DEEP SEWERS) ON UPSTREAM SIDE OF SEWER AND IN LINE WITH SEWER (PROVIDE 40 FEET MINIMUM FOR OVER 20' DEEP SEWERS). THE UTILITY CAN REQUIRE DIFFERENT EASEMENT WIDTHS AT ITS DISCRETION.
6. THE DEVELOPER SHALL BE RESPONSIBLE FOR PROVIDING A THREE-YEAR MAINTENANCE BOND COVERING THE COSTS OF INSTALLATION OF THE SANITARY SEWER. THE BOND MUST BE FOR TEN PERCENT (10%) OF THE COSTS OF INSTALLING THE SANITARY SEWER AND MUST BE WRITTEN TO AND APPROVED BY THE UTILITY.
7. ALL AREAS DISTURBED BY THE CONSTRUCTION PROCESS SHALL BE FERTILIZED AND SEEDED. ADEQUATE MULCHING SHALL BE PLACED AFTER SEEDING AND FERTILIZING. IT SHALL BE THE DEVELOPER'S RESPONSIBILITY TO SEE THAT ADEQUATE GROWTH IS ESTABLISHED.
8. INSTALLATION OF OR PROVISIONS FOR THE INSTALLATION OF SANITARY SEWER UTILITIES, INCLUDING SERVICE LATERALS TO BE PLACED UNDER PAVEMENTS, SHALL BE ESTABLISHED PRIOR TO THE CONSTRUCTION OF THE PAVEMENTS.
9. DEVELOPER SHALL CONTACT THE UTILITY IF ANY DAMAGE TO SANITARY SEWER UTILITIES OCCURS. ALL COSTS OF REPAIR SHALL BE PAID BY THE DEVELOPER. OTHER DAMAGED UTILITIES SHALL BE REPAIRED IN ACCORDANCE WITH THE AFFECTED UTILITY'S REPAIR POLICY.
10. THE CONSTRUCTION WORK SHALL CONFORM TO THE REQUIREMENTS OF AMERICAN SUBURBAN UTILITIES AND THE INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT. NO WORK SHALL BE PERFORMED UNTIL PLANS HAVE BEEN APPROVED BY THE UTILITY. A UTILITY SERVICE AGREEMENT HAS BEEN EXECUTED BY THE DEVELOPER AND THE UTILITY, AND A PRECONSTRUCTION MEETING HAS BEEN HELD WITH THE UTILITY.
11. THE DEVELOPER SHALL NOTIFY THE UTILITY AT LEAST 48 HOURS PRIOR TO STARTING OR RESUMING WORK ON A PROJECT.
12. THE DEVELOPER SHALL PROVIDE SAFE ACCESS TO THE CONSTRUCTION SITE FOR ALL INSPECTORS AND WILL PROVIDE MATERIAL SAMPLES FOR TESTING. WORK REQUIRING INSPECTION BY THE UTILITY SHALL BE PERFORMED DURING THE UTILITY'S NORMAL WORK HOURS UNLESS AN ADDITIONAL INSPECTION FEE IS PAID BY THE DEVELOPER FOR INSPECTION OUTSIDE OF SUCH HOURS.
13. INFORMATION REQUIRED FOR PREPARING "AS-BUILT" DRAWINGS MUST BE RECORDED PRIOR TO THE BACKFILLING OF THE UNDERGROUND FACILITY.
14. FOR UTILITY PLACEMENT FOR OTHER THAN SINGLE FAMILY RESIDENCES, CONTACT THE AMERICAN SUBURBAN UTILITIES OFFICE FOR REQUIREMENTS. IN COMMERCIAL DEVELOPMENTS, EACH TENANT/UNIT SHALL HAVE A SEPARATE WATER METER INSTALLED WHERE THE UTILITY'S STAFF CAN READ IT MONTHLY. SEPARATE SANITARY LATERALS FOR EACH TENANT/UNIT SHALL ALSO BE PROVIDED.
15. COINCIDENT WITH DELIVERY OF THE APPROPRIATE BILL OF SALE OR TRANSFER OF OWNERSHIP DOCUMENTS BY DEVELOPER TO UTILITY, THE DEVELOPER SHALL ALSO DELIVER TO UTILITY 2 SETS OF THE FOLLOWING INFORMATION IN ORDER TO EXPEDITE THE REVIEW PROCESS
- "AS-BUILT" DRAWINGS AND SPECIFICATIONS CERTIFIED BY A PROFESSIONAL ENGINEER OR LAND SURVEYOR, INCLUDING A DESCRIPTION, ELEVATION, AND DATUM OF BENCHMARK(S) UTILIZED FOR THE AS-BUILTS.
 - CERTIFICATION OF CONSTRUCTION IN ACCORDANCE WITH THE UTILITY'S SPECIFICATIONS, SIGNED BY A PROFESSIONAL ENGINEER OR LAND SURVEYOR.
 - RECORDED EASEMENTS AND SURVEY, ALL PERMITS, AND ANY OTHER PERTINENT INFORMATION.
 - FINAL RECORDED PLAT OF THE DEVELOPMENT
 - WAIVERS OF LIEN FOR MATERIALS, LABOR AND EQUIPMENT
 - THREE (3) YEAR MAINTENANCE BOND FOR MATERIALS AND WORKMANSHIP FROM THE DATE OF THE FINAL TRANSFER
 - CERTIFIED SCHEDULE ITEMIZING ALL COST OF LABOR, MATERIAL, OVERHEAD AND PROFIT.
 - COPIES OF DRAWINGS IN DIGITAL FORMAT THAT CAN BE ACCESSSED BY THE CURRENT VERSION OF AUTOCAD BEING USED BY THE UTILITY. THE DIGITAL DRAWINGS SHALL CONTAIN LOT LINES, LOT NUMBERS, EASEMENTS (FROM FINAL PLAT), AND POINTS WITH NORTHING AND EASTING COORDINATES FOR THE CENTER OF THE MANHOLE LID AND MANHOLE NUMBERS (ASSIGNED BY UTILITY) FOR THE AS-BUILT LOCATION OF ALL MANHOLE AND LIFT STATION STRUCTURES AND LINework CONNECTING SAID STRUCTURES. THE DRAWINGS SHALL ALSO CONTAIN AT LEAST TWO POINTS OF HORIZONTAL CONTROL IN THE COUNTY CONSISTING OF PUBLIC LAND SURVEY SYSTEM (PLSS) SECTION CORNERS OR PUBLISHED TIPPECANOE COUNTY MANAGEMENT INFORMATION TECHNOLOGY SERVICES DEPARTMENT (MITS) CONTROL FOR SPATIAL REFERENCE OR AT LEAST TWO POINTS DEPICTING PHYSICAL FEATURES WHICH ARE IDENTIFIABLE FROM THE MOST RECENT MITS GIS DATA. THESE POINTS SHALL ALSO BE SHOWN ON A HARD COPY OF THE MOST RECENT MITS GIS DATA OR A WRITTEN DESCRIPTION OF THEIR LOCATION SHALL BE PROVIDED. THE ADEQUACY OF THE REFERENCE POINTS SHALL BE DETERMINED BY THE UTILITY.
 - A .PDF DIGITAL COPY OF THE FINAL APPROVED VERSION OF THE PLANS/AS-BUILTS, ALONG WITH 2 PAPER SETS OF THE PLANS/AS-BUILTS, AS APPLICABLE TO THE SUBMITTAL, THAT INCLUDES SIGNATURES FROM ALL GOVERNING JURISDICTIONS, AS APPLICABLE.
 - TAP LOCATIONS MEASURED FROM 2 FRONT LOT CORNERS (OR 1 FRONT CORNER AND PERPENDICULAR TO BACK OF CURB IN THE CASE OF STREET CORNER LOTS), ALONG WITH APPROXIMATE DEPTH, IN TYPED AND IN DIGITAL FORMAT WITH ADDRESS AND LOT NUMBERS.
16. THE UTILITY WILL FLOW MONITOR, RE-TELEVISION, AND/OR PERIODICALLY INSPECT THE SANITARY SEWER LINES AT THE UTILITY'S EXPENSE PRIOR TO THE EXPIRATION OF THE THREE (3) YEAR MAINTENANCE BOND. ALL DEFICIENCIES NOTED BY THE INSPECTION SHALL BE REPAIRED BY THE DEVELOPER PRIOR TO EXPIRATION OF THE MAINTENANCE PERIOD AND THE RELEASE OF THE BOND.
17. IN ORDER TO EXPEDITE THE REVIEW PROCESS, 2 PAPER SETS OF CONSTRUCTION PLANS, PERMITS, AND RELATED INFORMATION SHALL BE PROVIDED TO THE UTILITY.
18. THESE STANDARDS ARE SUBJECT TO REVISION BY THE UTILITY. NEW STANDARDS IN EFFECT AT THE TIME OF CONSTRUCTION SHALL APPLY AND THE UTILITY SHALL BE CONTACTED FOR INCLUSION OF THE NEW STANDARDS AS PART OF THE PROJECT PRIOR TO CONSTRUCTION.
19. ELEVATIONS OF ALL CONNECTIONS TO EXISTING SEWERS ARE TO BE FIELD VERIFIED, IN WRITING, AND PROVIDED TO UTILITY BEFORE CONSTRUCTION BEGINS. AT ITS DISCRETION, UTILITY MAY REQUIRE INDEPENDENT VERIFICATION AT DEVELOPER'S EXPENSE.
20. CONSTRUCTION PLANS SHALL INCLUDE AN OVERALL UTILITY SHEET(S) AND AN OVERALL SANITARY SEWER SHEET(S) WHICH INCLUDES THE LOCATION OF SANITARY SEWERS, LATERALS, MANHOLE LOCATIONS AND MANHOLE NUMBERS.

ALL "AS-BUILT" DRAWINGS AND COSTS SHALL BE EXAMINED AND VERIFIED BY THE UTILITY.

* ALL REFERENCES TO DEVELOPER SHALL INCLUDE ANY AGENT OF THE DEVELOPER, INCLUDING DEVELOPER'S CONTRACTOR(S).

SEWER	WATER						
	6"	8"	10"	12"	14"	16"	
8"	11"	11"	11"	12"	12"	12"	
10"	11"	11"	11"	12"	12"	12"	
12"	11"	12"	12"	12"	12"	12"	
14"	12"	12"	12"	12"	12"	12"	
16"	12"	12"	12"	12"	12"	12"	
21"	12"	12"	12"	12"	12"	13"	
24"	12"	12"	12"	12"	12"	13"	
27"	12"	12"	12"	13"	13"	13"	
30"	12"	12"	13"	13"	13"	13"	

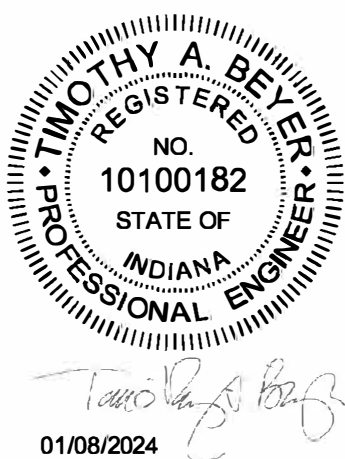
SANITARY	BELL DIA.
8"	10.0"
10"	12.3"
12"	14.3"
14"	17.3"
16"	21.5"
21"	25.0"
24"	28.0"
27"	33.0"
30"	36.0"

WATER	BELL DIA.
6"	8.5"
8"	11.1"
10"	13.8"
12"	16.2"
14"	19.0"
16"	21.7"

STORM	BELL DIA.
12"	20.0"
15"	23.9"
18"	27.7"
24"	33.0"
30"	39.0"
36"	45.5"
42"	54.0"
48"	61.0"
54"	68.0"

SEWER SIZE	MINIMUM DESIGN GRADE	MIN. DESIGN GRADE, RUNS LESS THAN: 120 FEET 60 FEET	MINIMUM GRADE	MAXIMUM GRADE	MAXIMUM MH SPACING
8"	0.45%	0.56%	0.75%	0.40%	11%
10"	0.33%	0.43%	0.63%	0.28%	8.25%
12"	0.27%	0.37%	0.57%	0.22%	6.5%
15"	0.20%	0.30%	0.50%	0.15%	4.75%
18"	0.17%	0.27%	0.47%	0.12%	3.75%
21"	0.15%	0.25%	0.45%	0.10%	3%
24"	0.12%	0.22%	0.42%	0.08%	2.5%
27"	0.11%	0.21%	0.41%	0.07%	2.2%
30"+	0.10%	0.20%	0.40%	0.06%	1.9%

CONSTRUCTION PLAN DESIGN GRADES SHALL NOT BE LESS THAN THE MINIMUM DESIGN GRADES IN THE ABOVE TABLE WITHOUT PRIOR WRITTEN APPROVAL FROM THE UTILITY. PLAN DESIGN GRADES GREATER THAN THE MINIMUM DESIGN GRADE SHALL BE PROVIDED WHEN PRACTICAL. RUN LENGTHS GREATER THAN 120 FEET SHALL BE USED WHENEVER REASONABLY POSSIBLE.



TELEVISION INSPECTION CRITERIA

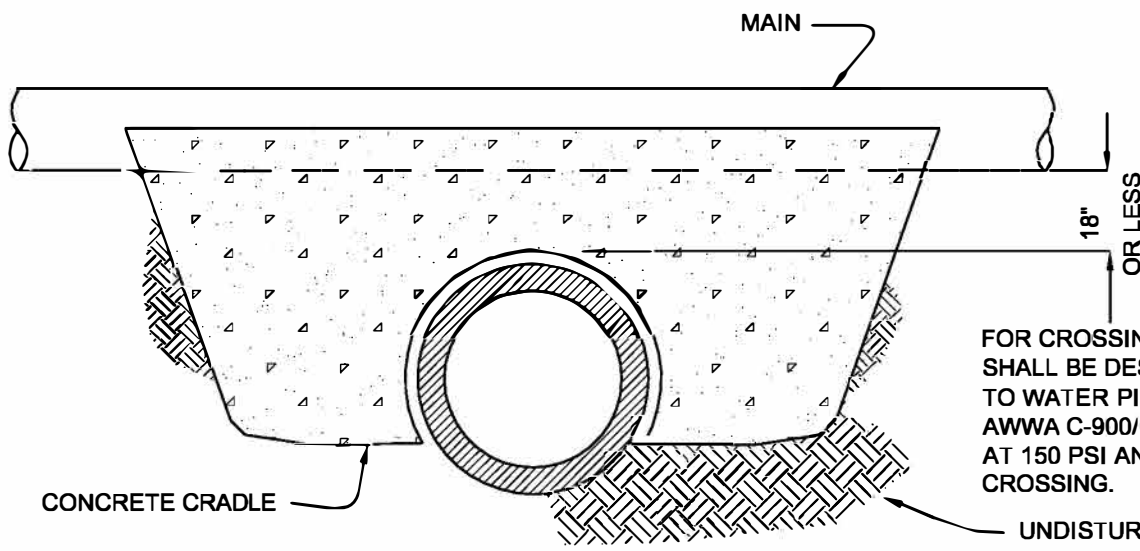
SANITARY SEWERS

SEWERS SHALL BE "FLOODED" BEFORE TELEVISION INSPECTION. THE IMAGE SHALL BE CLEAR ENOUGH TO ENABLE THE UTILITY REPRESENTATIVE AND OTHERS VIEWING THE MONITOR TO EASILY EVALUATE THE INTERIOR CONDITION OF THE PIPE. ALL PIPE JOINTS SHALL BE EXAMINED (CAMERA SHALL RUN IN THE UPSTREAM DIRECTION).

ALL UNACCEPTABLE CONDITIONS FOUND DURING TELEVISION OR OTHER INSPECTION MUST BE CORRECTED BY THE DEVELOPER AND RETELEVISION. THIS INCLUDES INSPECTIONS OF LATERALS OR PRIVATE SEWERS.

UNACCEPTABLE CONDITIONS ARE CONDITIONS THAT ADVERSELY AFFECT THE ABILITY OF THE SYSTEM TO FUNCTION AS DESIGNED OR TO BE PROPERLY MAINTAINED AND MAY INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

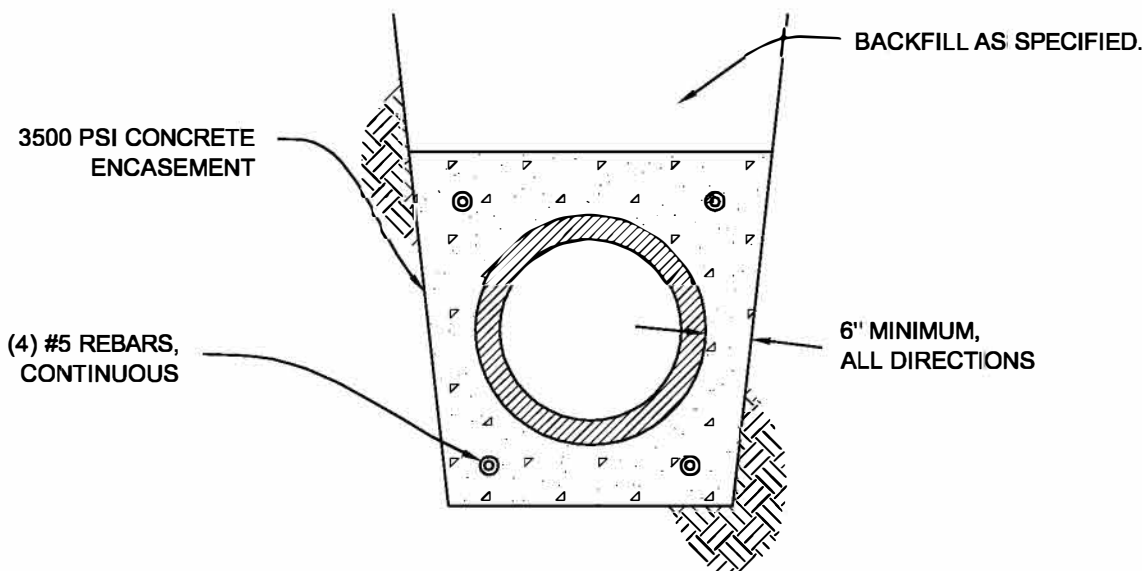
- A. PROTRUDING TAPS
- B. ROOT INTRUSION
- C. CRACKED OR FAULTY PIPE/DAMAGED PIPE OR MANHOLES/USE OF NON-COMPLIANT MATERIALS
- D. IMPROPER PIPE REPAIR
- E. MISALIGNED OR DEFORMED PIPE
- F. DEBRIS IN LINE OR IN JOINTS
- G. INFILTRATION/EXFILTRATION
- H. EXPOSED GASKETS/EXCESSIVE GAPS AT JOINTS
- I. BELLIES OR SAGS WITH A DEPTH GREATER THAN OR EQUAL TO 10 % (OR A MAXIMUM OF 1-1/2" FOR 18" PIPE) OF PIPE DIAMETER AND/OR A LENGTH GREATER THAN 25 FEET
- J. MANHOLES WITH HOLES CORED AT OR NEAR MANHOLE JOINTS.



NOTE: THIS DETAIL SHALL BE USED WHEN A MAIN, SEWER OR WATER CROSSES WITHIN 18" OF ANOTHER PIPE OR CONDUIT.

PIPE CROSSING DETAIL

SCALE: NONE



PIPE ENCASEMENT DETAIL

NOT TO SCALE

PROJECT NAME	PROJECT SHEET NUMBER
	of

AMERICAN SUBURBAN UTILITIES

(800) 382-5544	HOLEY MOLEY	3350 WEST, 250 NORTH	DATE JAN. 2024
(765) 463-3856	AMERICAN SUBURBAN UTILITIES	WEST LAFAYETTE, INDIANA 47906	SHEET
(765) 463-6664	FIRE DEPT.	GENERAL NOTES and GUIDELINES	ASU1
(765) 423-9321	SHERIFF	FOR UTILITY LOCATIONS	

TO TO HORIZONTAL DISTANCE

NOTES: 1. SANITARY SEWERS AND WATERMANS SHALL BE LAID OUT SUCH THAT THEY CONTAIN THE HORIZONTAL SEPARATION FROM CENTERLINE TO CENTERLINE OF PIPE AS SHOWN IN THE ABOVE TABLE.

2. 18" VERTICAL SEPARATION FROM OUTSIDE TO OUTSIDE OF PIPE SHALL BE BASED ON THE BELL DIAMETERS IN THE ABOVE TABLE. WHEN VERTICAL SEPARATION IS LESS THEN 18" USING DATA FROM THE ABOVE TABLE, THE PROFILE SHEETS SHALL NOTE THAT A CONCRETE CRADLE IS REQUIRED AND SHALL CONTAIN A NOTE REFERRING TO THE PIPE CROSSING DETAIL ON THIS SHEET.

HORIZONTAL AND VERTICAL SEPARATION DATA

BELL DIAMETERS FOR PIPE

DESIGN INFORMATION FOR SANITARY SEWERS

PIPE GRADES AND PIPE TYPES



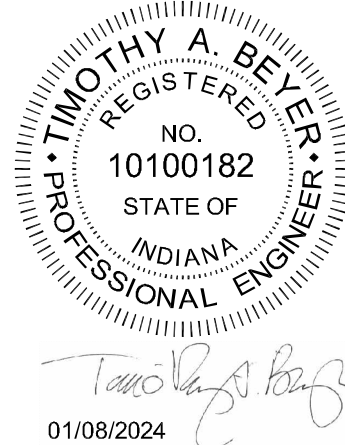
IF "B" IS LESS THAN 1'-0" THEN LARGER DIAMETER SECTION "A" SHALL BE USED THROUGH TOP OF MANHOLE.

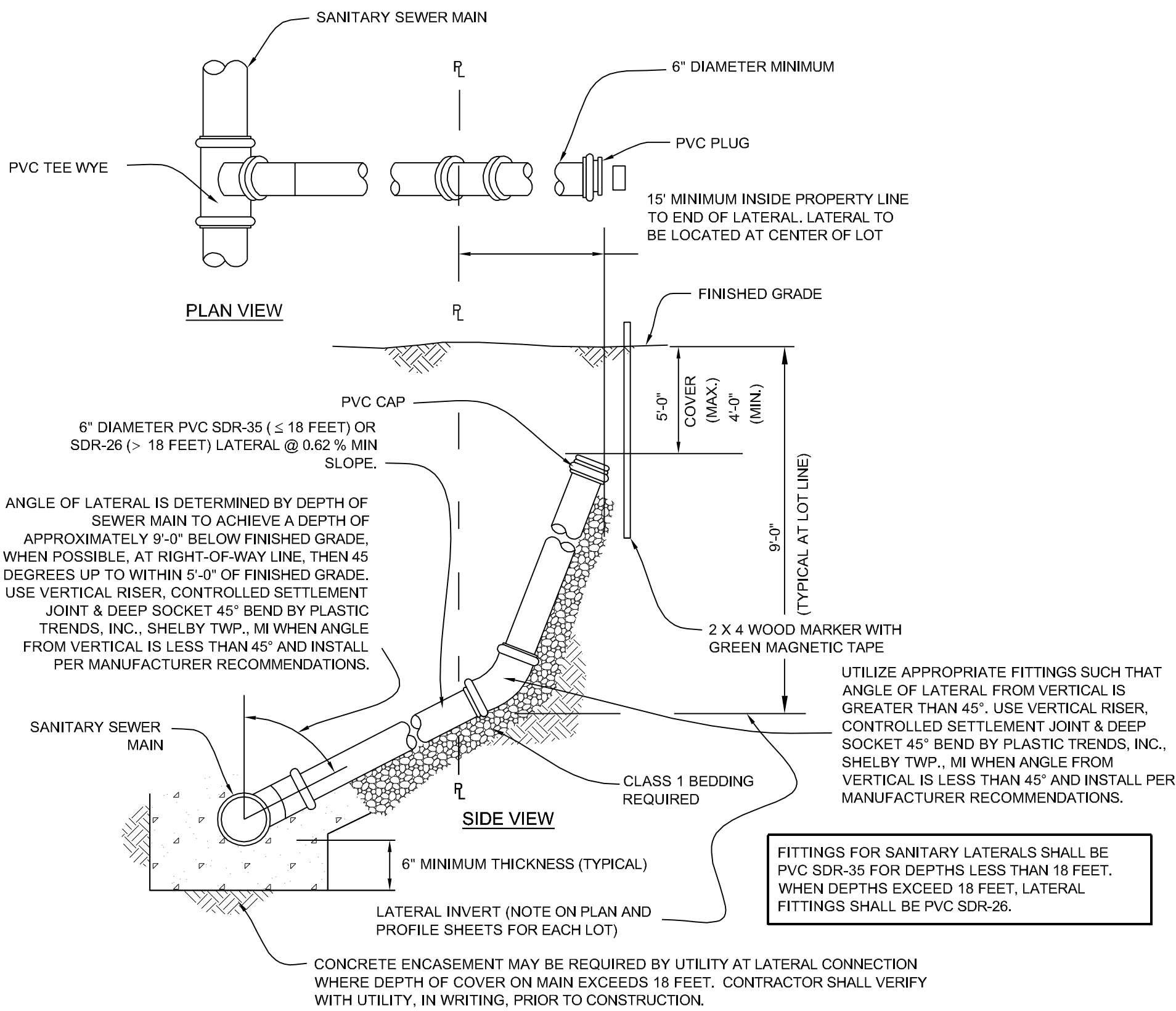
FOR MANHOLE STRUCTURES LARGER THAN 4 FEET IN DIAMETER

NOT TO SCALE



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(765)	463-3856	AMERICAN SUBURBAN UTILITIES		JAN. 2024
(765)	463-6664	FIRE DEPT.		SHEET
(765)	423-9321	SHERIFF		ASU2

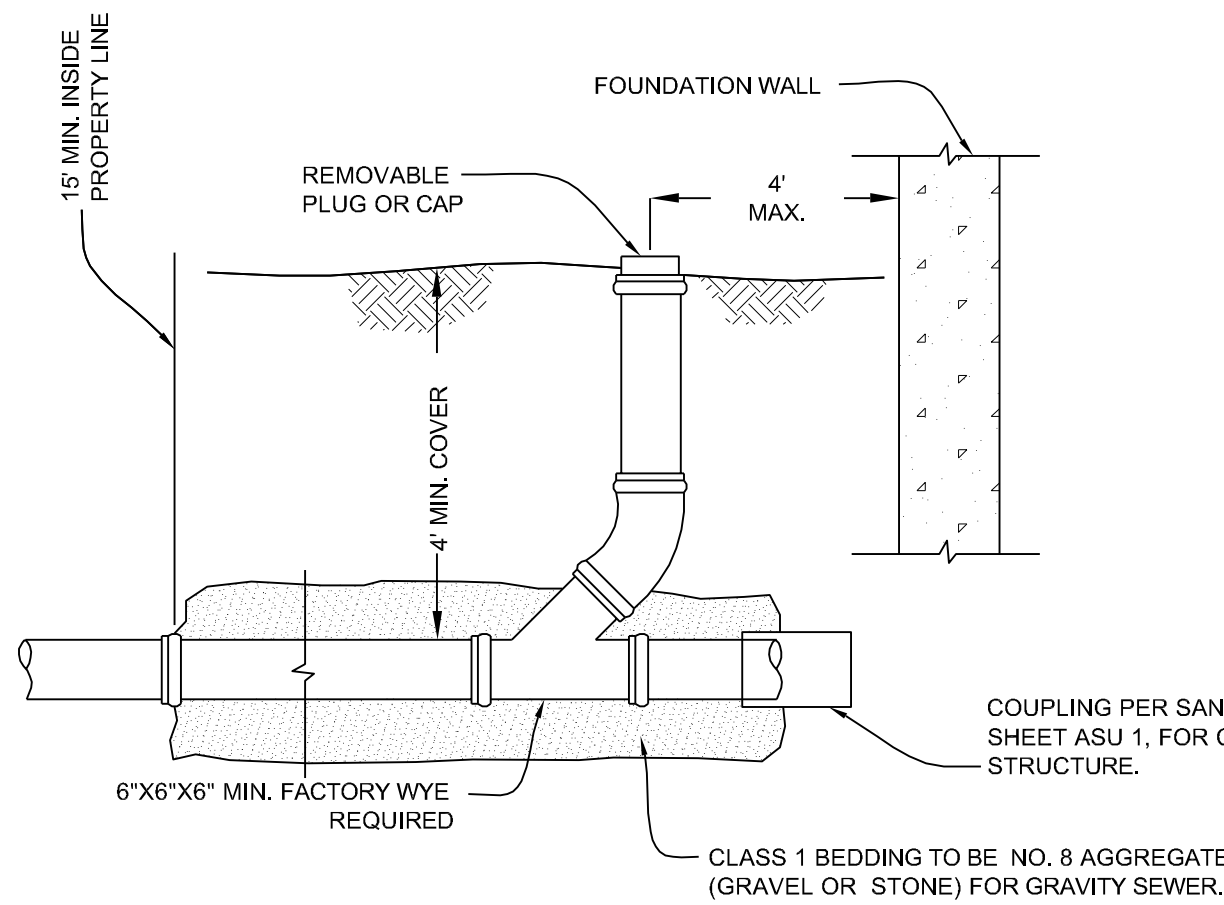




LATERAL CONNECTION DETAIL

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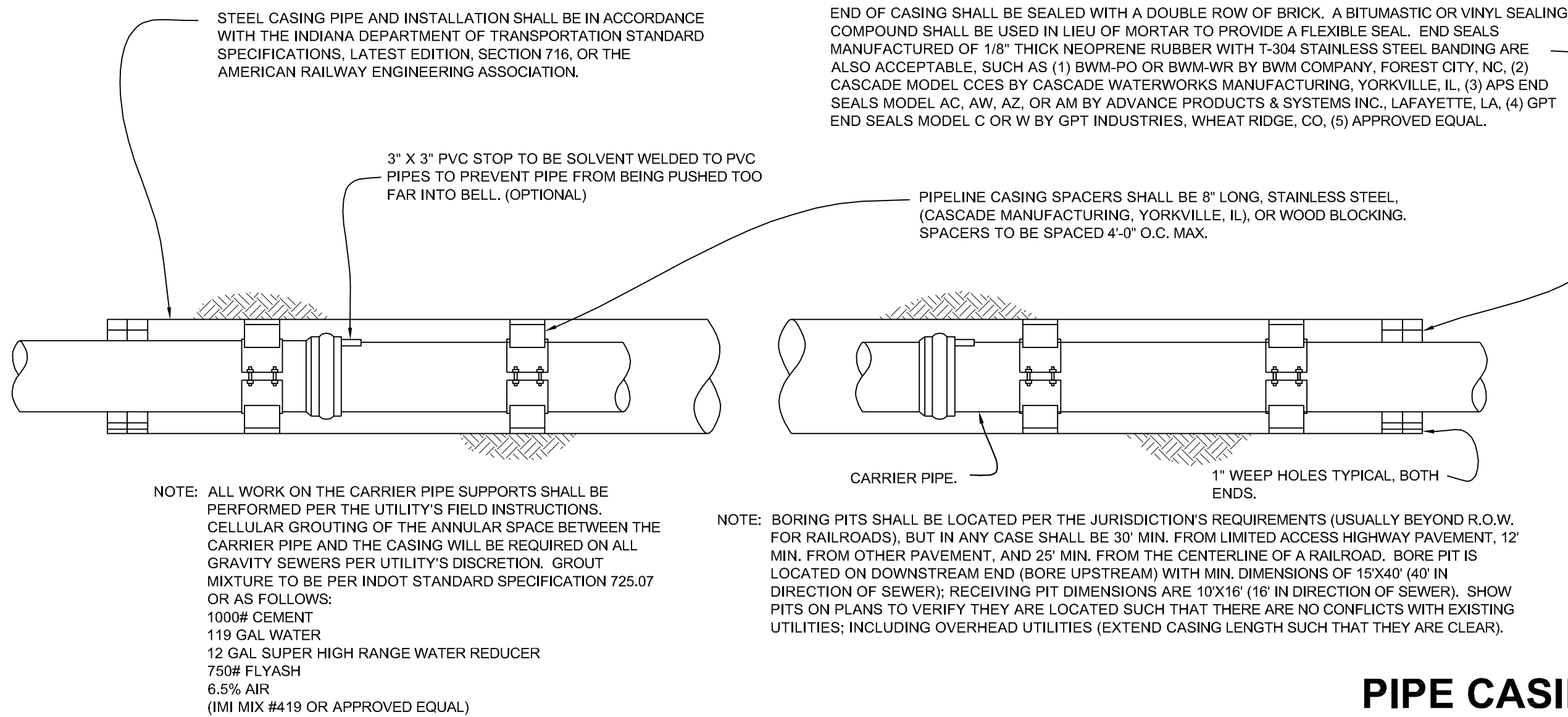
SEWER TO PROPERTY



LATERAL CONNECTION DETAIL

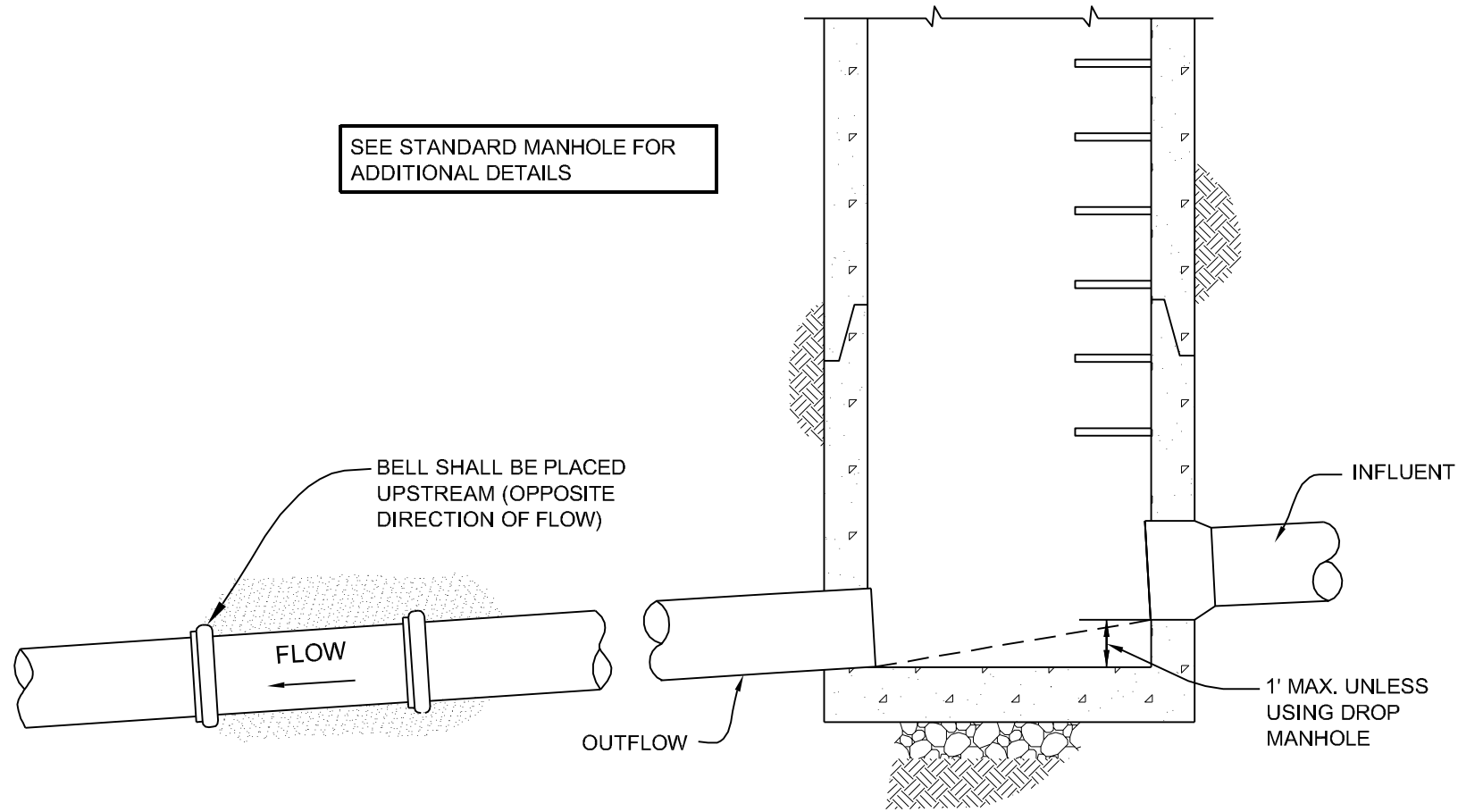
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PROPERTY TO STRUCTURE



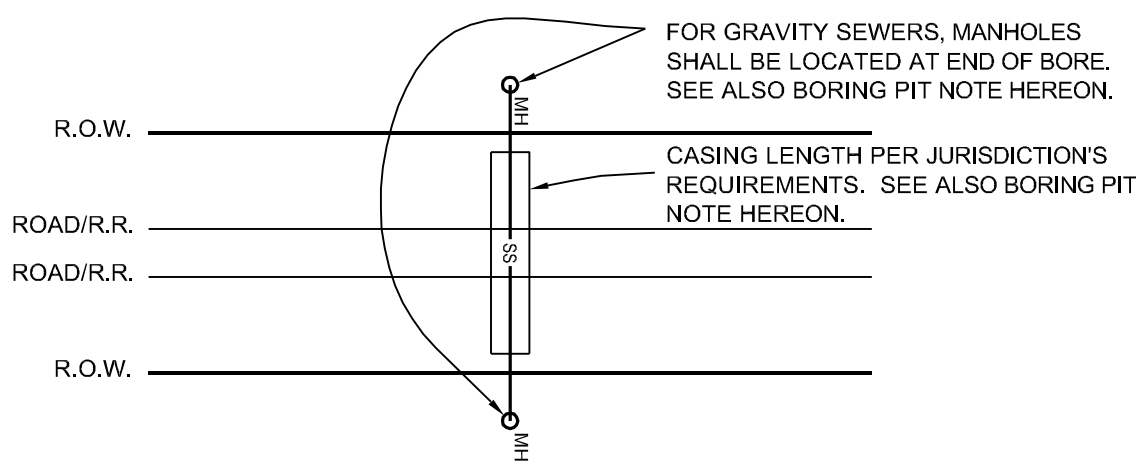
PIPE CASING DETAILS

NOT TO SCALE



SEWER DESIGN AND INSTALLATION DETAILS

NOT TO SCALE

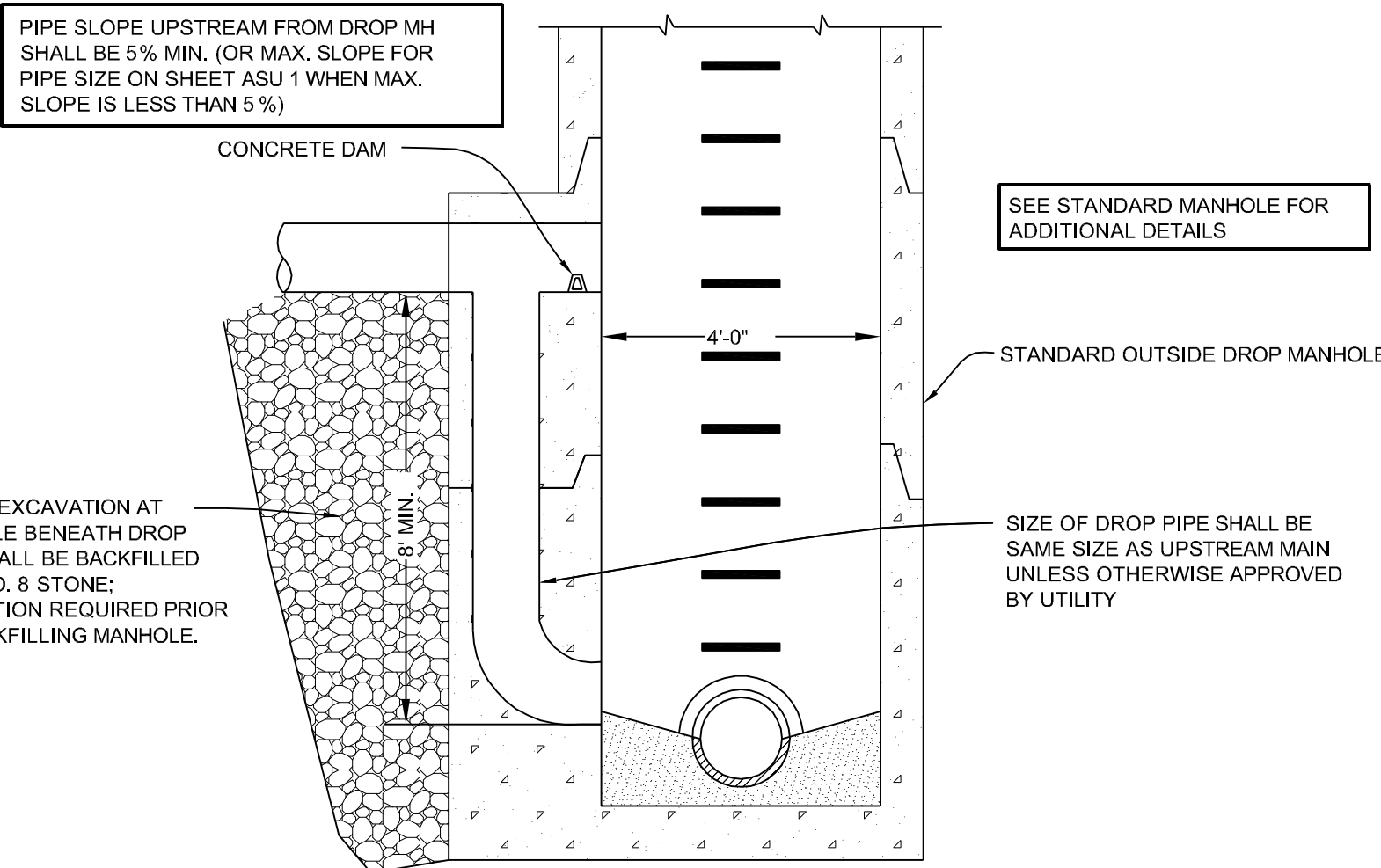


THE CASING PIPE SHALL BE WELDED STEEL PIPE, NEW AND UNUSED MATERIAL, IN ACCORDANCE WITH CURRENT ASTM SPECIFICATION A139, GRADE B FOR "ELECTRIC FUSION OF WELDED STEEL PIPE", WITH A MINIMUM YIELD OF 35,000 PSI.

THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE AT LEAST SIX (6) INCHES GREATER THAN THE LARGEST DIAMETER OF THE PIPELINE JOINT (BELL DIAMETER). LARGER DIAMETER MAY BE NECESSARY WHEN CASING IS BORED (FLAT) FROM UPSTREAM END.

THE MINIMUM WALL THICKNESS OF THE CASING PIPE SHALL BE AS LISTED IN THE FOLLOWING TABLE OR AS SHOWN ON THE APPLICABLE DRAWINGS:

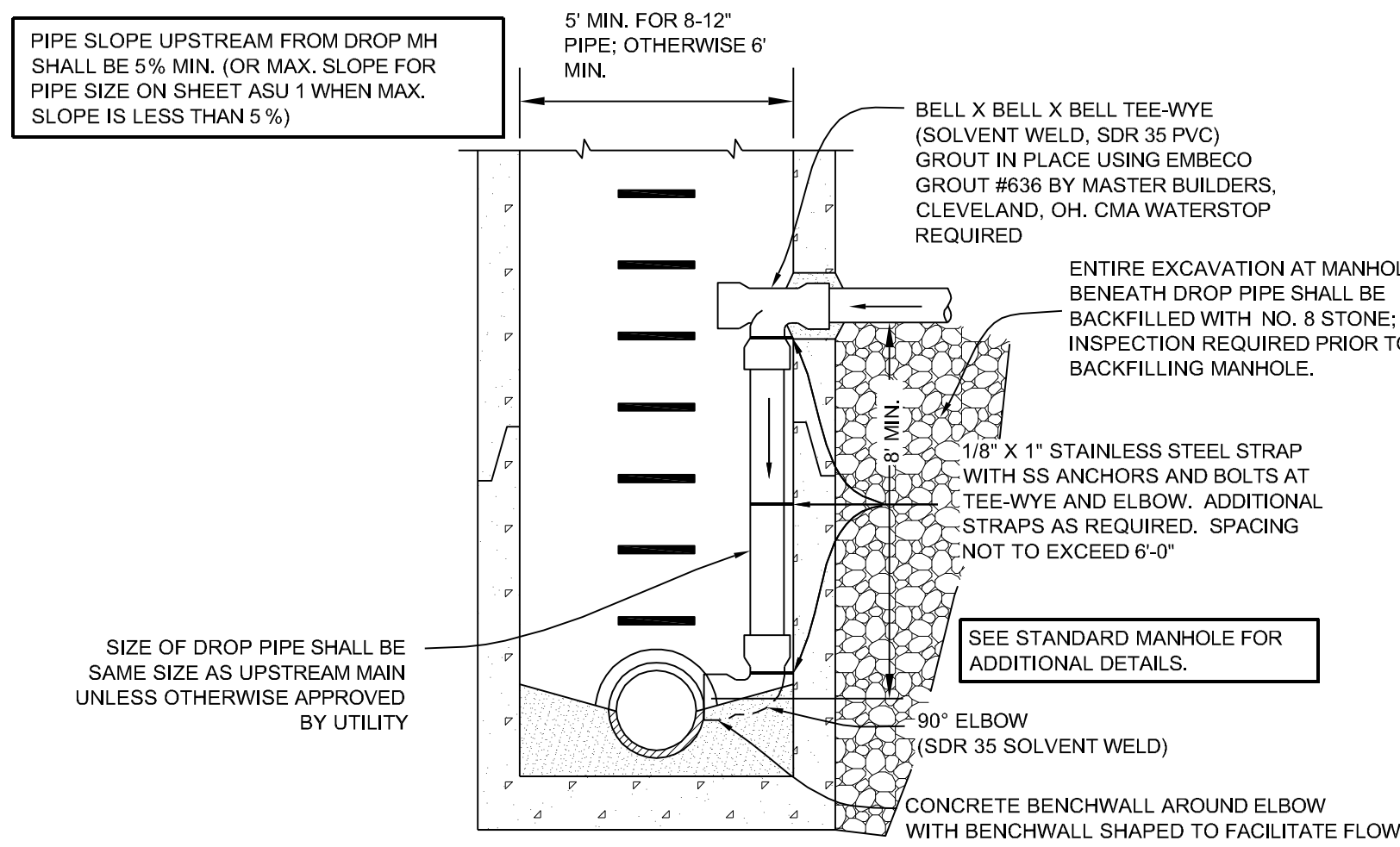
DIAMETER OF CASING	UNDER HIGHWAY	WALL THICKNESS (IN.)	UNDER RAILROAD
18" OR SMALLER	1/4 (0.25)		5/16 (0.3125)
20"	5/16 (0.3125)		3/8 (0.375)
22"-26"	3/8 (0.375)		7/16 (0.4375)
28"-32"	1/2 (0.5)		1/2 (0.5)
34"-38"	1/2 (0.5)		9/16 (0.5625)
40"-42"	1/2 (0.5)		5/8 (0.625)
44"-48"	9/16 (0.5625)		11/16 (0.6875)



NOTE: PRIOR WRITTEN APPROVAL OF THE UTILITY IS REQUIRED FOR USE OF AN OUTSIDE DROP MANHOLE

PRECAST OUTSIDE DROP MANHOLE

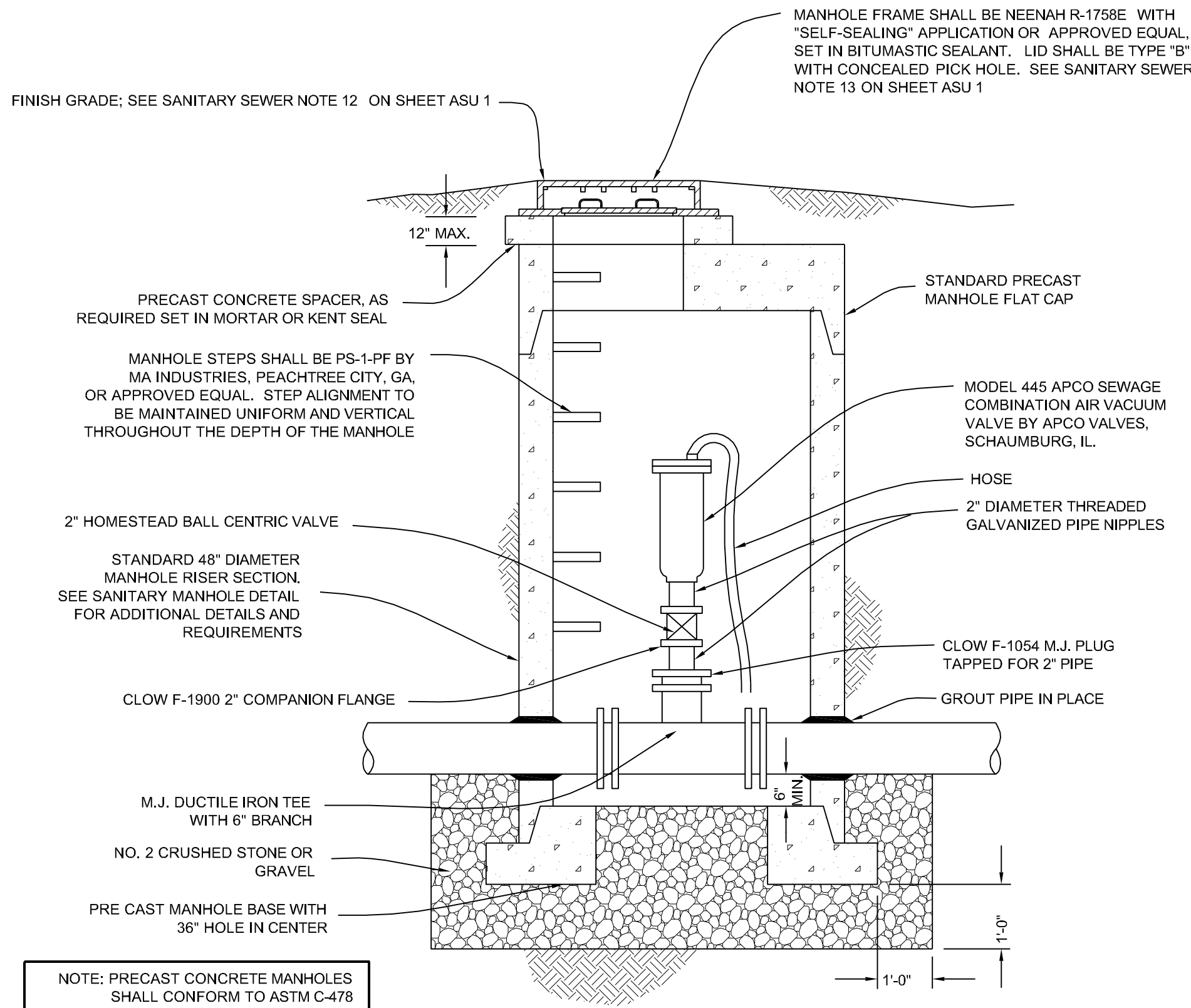
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NOTE: PRIOR WRITTEN APPROVAL OF THE UTILITY IS REQUIRED FOR USE OF AN INSIDE DROP MANHOLE

INSIDE DROP MANHOLE DETAIL

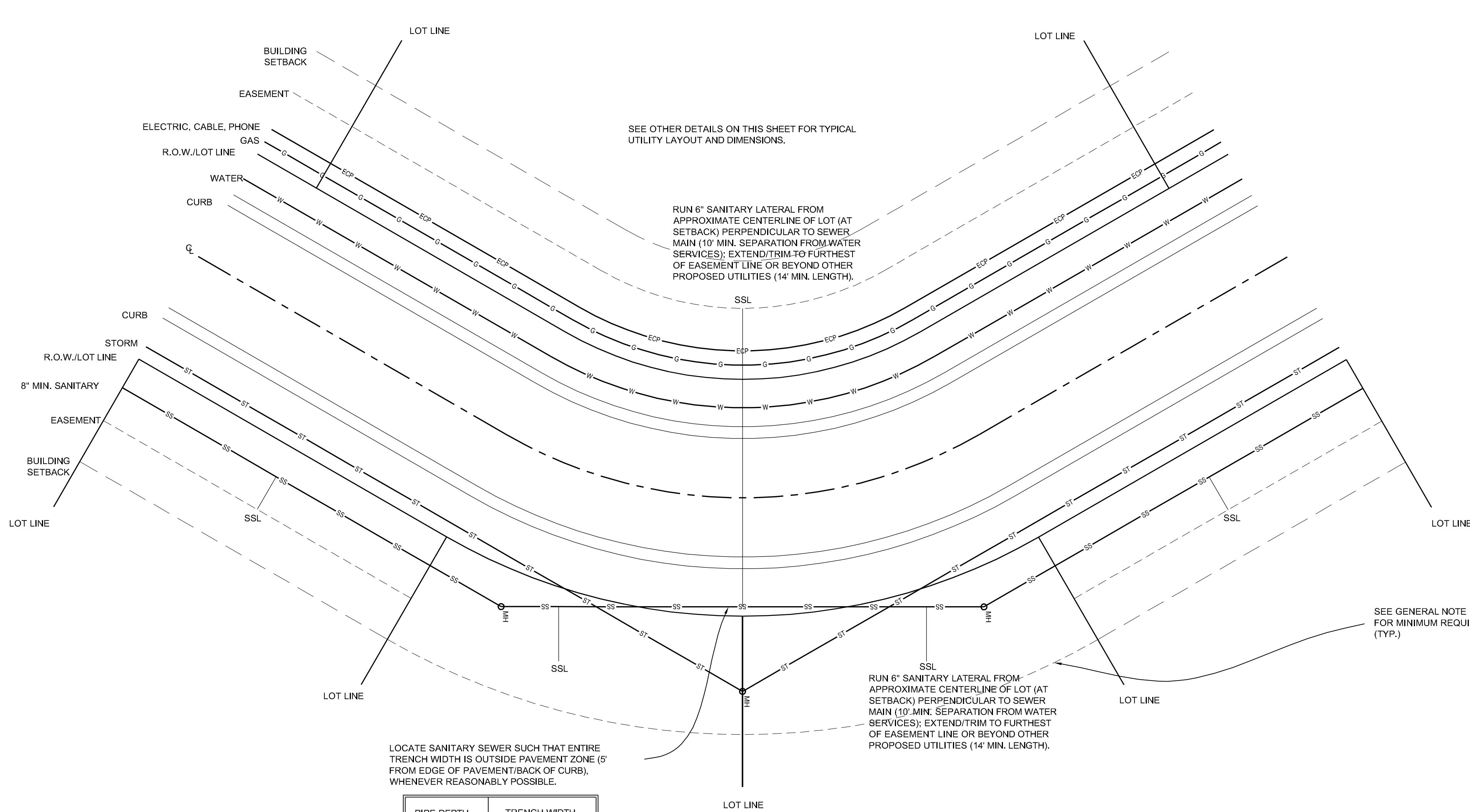
(EXISTING MANHOLES ONLY)
NOT TO SCALE



SEWAGE FORCE MAIN AIR RELEASE MANHOLE (FORCEMAIN 4"Ø TO 12"Ø)

NOT TO SCALE

			PROJECT NAME	PROJECT SHEET NUMBER
				of
AMERICAN SUBURBAN UTILITIES				
(800) 382-5544	HOLEY MOLEY	3350 WEST, 250 NORTH WEST LAFAYETTE, INDIANA 47906		DATE JAN. 2024
(765) 463-3856	AMERICAN SUBURBAN UTILITIES			SHEET
(765) 463-6664	FIRE DEPT.	SANITARY SEWER TYPICAL DETAILS and NOTES		ASU3
(765) 423-9321	SHERIFF			



PIPE DEPTH	TRENCH WIDTH
0-14"	PIPE O.D. + 4.5'
14-18"	PIPE O.D. + 5'
18-22"	PIPE O.D. + 6'
22+"	PIPE O.D. + 7'

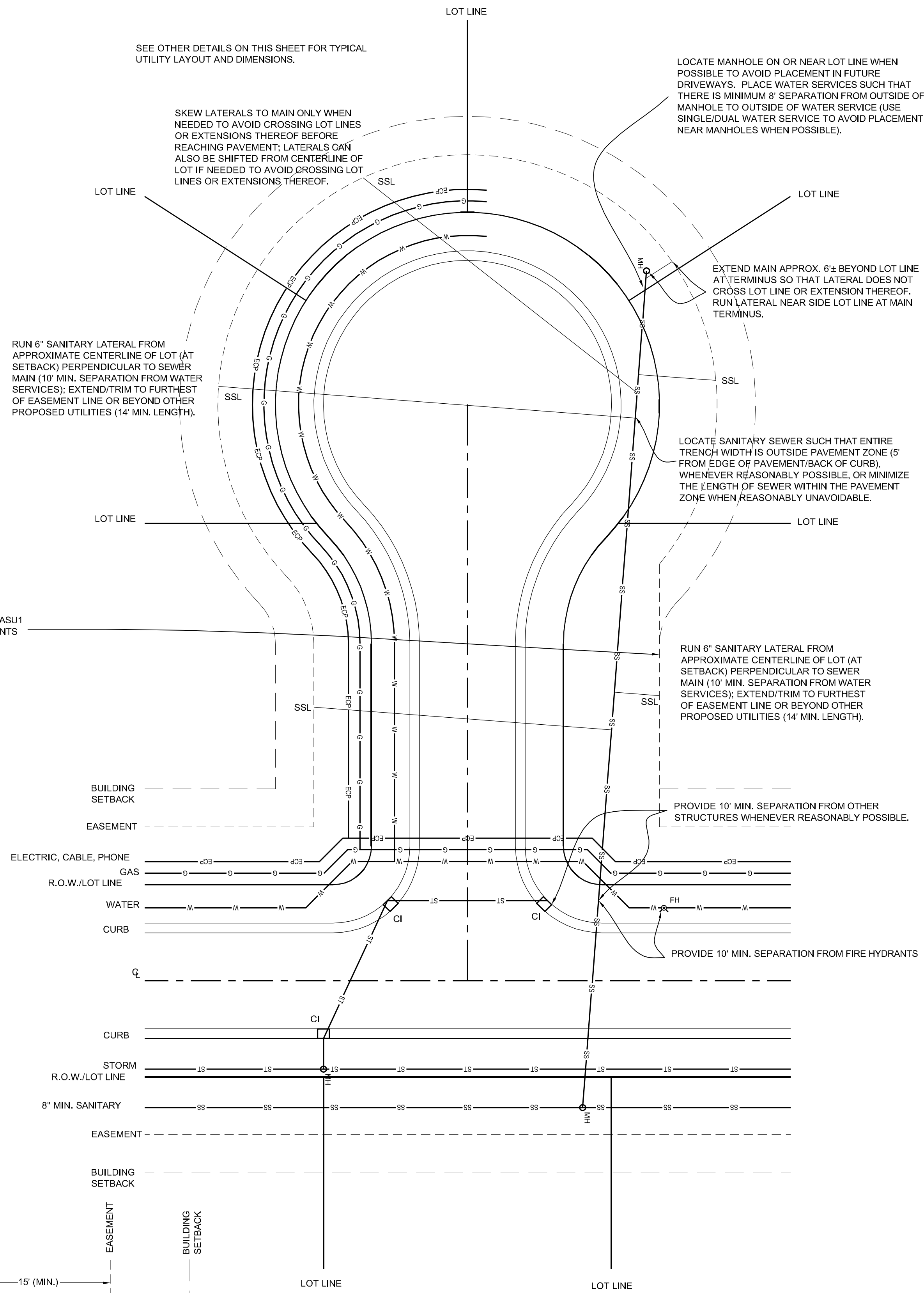
STREET PLAN - CURVE

NOT TO SCALE

THE UTILITY LAYOUTS SHOWN ON THIS PAGE ARE TYPICAL REQUIREMENTS FOR RESIDENTIAL SUBDIVISIONS WITH PUBLIC STREETS. LAYOUTS CAN VARY FROM THOSE SHOWN HEREON; HOWEVER, MINIMUM SEPARATIONS SHOWN FROM OTHER UTILITIES SHOULD GENERALLY BE MAINTAINED AND SEWERS SHOULD BE KEPT OUTSIDE PAVEMENT ZONES AS MUCH AS POSSIBLE.

FOR APARTMENT PROJECTS, COMMERCIAL SITE DEVELOPMENTS, & DEVELOPMENTS WITH SMALLER LOTS AND NARROWER PRIVATE ROADS, THE UTILITY MAY PERMIT THE SEWER TO BE LOCATED WITHIN PAVED AREAS.

IT IS RECOMMENDED THAT A PROPOSED UTILITY LAYOUT PLAN BE SUBMITTED TO THE UTILITY FOR REVIEW AND COMMENT PRIOR TO SUBMISSION OF PLAN AND PROFILE SHEETS AND A FULL SET OF CONSTRUCTION PLANS.



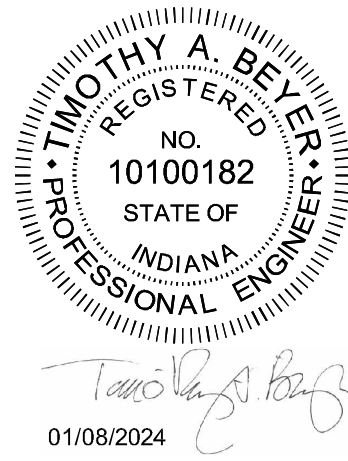
STREET PLAN - CUL-DE-SAC

NOT TO SCALE

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	of

AMERICAN SUBURBAN UTILITIES

(800) 382-5544	HOLEY MOLEY	3350 WEST, 250 NORTH	DATE JAN. 2024
(765) 463-3856	AMERICAN SUBURBAN UTILITIES	WEST LAFAYETTE, INDIANA 47906	SHEET
(765) 463-6664	FIRE DEPT.	SANITARY SEWER	ASU4
(765) 423-9321	SHERIFF	TYPICAL DETAILS and NOTES	



STREET CROSS SECTION

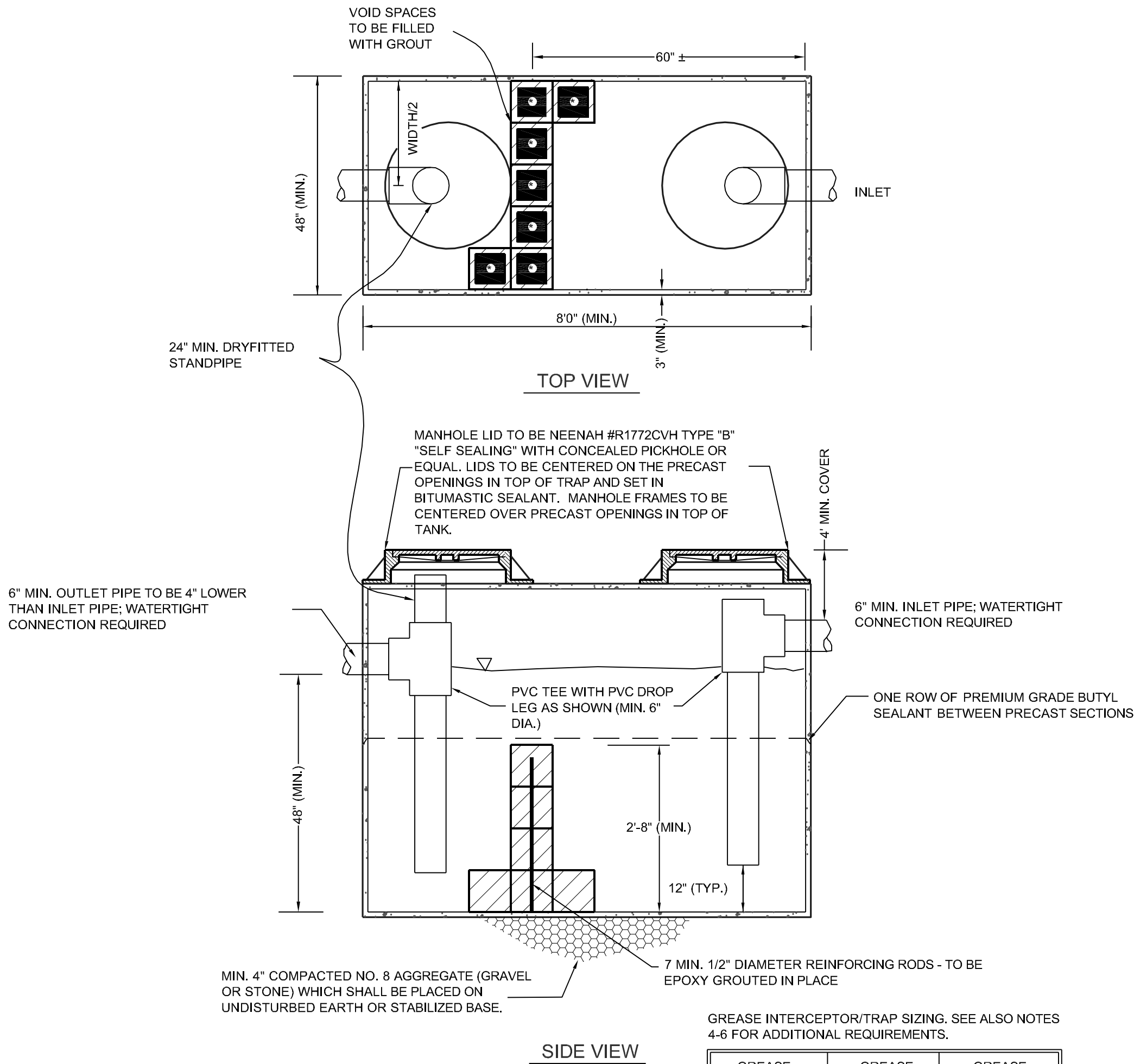
NOT TO SCALE

UTILITY LOCATIONS

NOT TO SCALE

STREET PLAN - TANGENT

NOT TO SCALE



GREASE INTERCEPTOR/TRAP SIZING. SEE ALSO NOTES 4-6 FOR ADDITIONAL REQUIREMENTS.

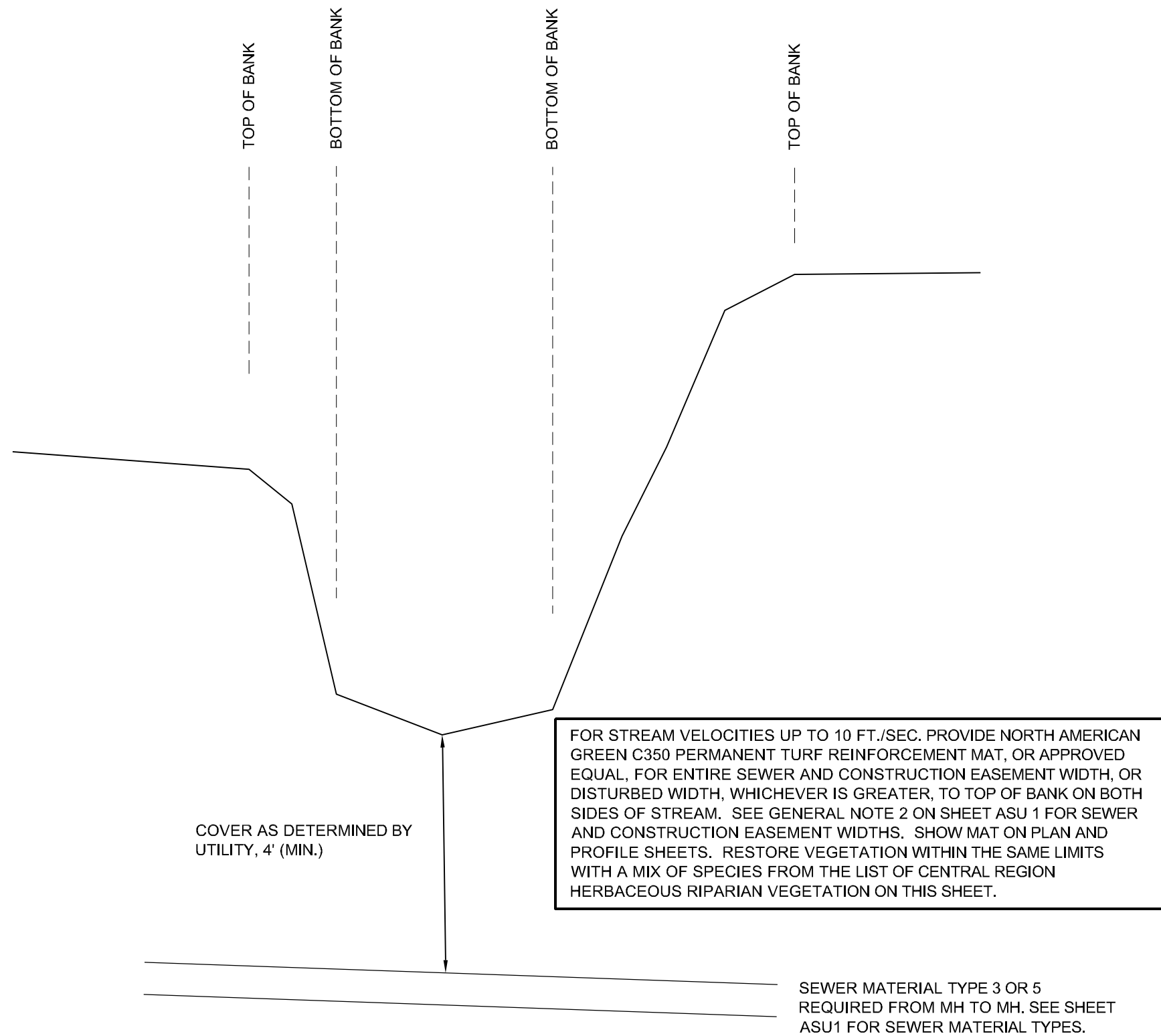
GREASE WASTE PIPE SIZE	GREASE INTERCEPTOR (GAL.)	GREASE TRAP (GPM)
2"	1,000	20
3"	1,000	35
4"	1,000	50
5"	2,000	NOT PERMITTED
6"	3,000	NOT PERMITTED

NOTES:

- FINAL DESIGN MUST BE APPROVED BY UTILITY. APPLICABLE CIVIL, ARCHITECTURAL, AND PLUMBING PLANS SHALL BE SUBMITTED FOR REVIEW OF GREASE TRAP/INTERCEPTORS.
- DETAILS SHOW A GENERAL SCHEMATIC LAYOUT.
- ADEQUATE STRUCTURAL STRENGTH SHALL BE PROVIDED TO ACCOMMODATE VEHICULAR TRAFFIC.
- GREASE TRAP/INTERCEPTOR SHALL BE SIZED BASED ON GREASE WASTE PIPE SIZE. SEE ACCOMPANYING TABLE. AS AN ALTERNATIVE, GREASE TRAP/INTERCEPTOR MAY BE SIZED USING GUIDELINES IN 2009 OR MORE CURRENT UNIFORM PLUMBING CODE, US EPA, OR PLUMBING AND DRAINAGE INSTITUTE STANDARD PDI-G101, OR OTHER METHOD REVIEWED AND APPROVED BY UTILITY.
- GREASE INTERCEPTORS ARE DEFINED AS VAULTS LOCATED ON THE EXTERIOR OF THE BUILDING AND SHALL BE USED INSTEAD OF USING GREASE TRAPS UNLESS OTHERWISE AUTHORIZED. IN WRITING, BY UTILITY. GREASE INTERCEPTORS SHALL BE BY RENSSELAER SEPTIC TANKS, 1211 NORTH WESTON STREET, RENSSELAER, INDIANA OR APPROVED EQUAL. GREASE TRAPS ARE DEFINED AS SMALL RESERVOIRS ON THE INTERIOR OF THE BUILDING BUILT INTO THE WASTEWATER PIPING A SHORT DISTANCE (NOT MORE THAN 25 FEET FROM FURTHEST FIXTURE DRAINED) FROM THE GREASE PRODUCING AREA.
- ALL WASTEWATER RUNNING FROM NEW OR REMODELED BUILDINGS THAT HAS THE POTENTIAL TO CONTAIN OILS OR GREASE FROM FOOD PREPARATION AREAS SHALL RUN THROUGH A GREASE TRAP OR INTERCEPTOR. THE GREASE TRAP/INTERCEPTOR MUST BE LOCATED SUCH THAT THEY ARE EASILY ACCESSIBLE FOR INSPECTION. A SEPARATE SANITARY SEWER LATERAL FOR DRAIN LINES FROM ALL GREASE-BEARING DRAINS IN FOOD PREPARATION AREAS IS REQUIRED AND SHALL RUN THROUGH THE GREASE TRAP/INTERCEPTOR. THIS INCLUDES BUT MAY NOT BE LIMITED TO MOP SINKS, WOKS, WASH SINKS, PREP SINKS, UTILITY SINKS, PRE-RINSE SINKS, CAN WASHES, AND FLOOR DRAINS IN FOOD PREPARATION AREAS SUCH AS THOSE NEAR A FRYER OR TILT/STEAM KETTLE. ALL OTHER SANITARY FLOWS SHALL BE DIRECTED TO A SEPARATE SANITARY LATERAL THAT BYPASSES THE GREASE TRAP /INTERCEPTOR. IF A GREASE TRAP/INTERCEPTOR IS INSTALLED ON A LINE THAT DRAINS FROM A FOOD GRINDER, THE TRAP/INTERCEPTOR MUST BE INSTALLED DOWNSTREAM OF AN ADEQUATE SOLIDS INTERCEPTOR.
- GREASE INTERCEPTORS/TRAPS SHALL BE CHECKED AT LEAST ONCE PER MONTH AND CLEANED AT LEAST ONCE EVERY 90 DAYS OR WHEN THE DEPTH OF GREASE EXCEEDS 1/3 OF THE DEPTH OF THE INTERCEPTOR/TRAP. TRAPS WILL LIKELY NEED TO BE CHECKED AND CLEANED MORE OFTEN (PERHAPS DAILY) DEPENDING ON THE FACILITY USE. ACCUMULATED GREASE SHALL EITHER BE PLACED INTO THE ESTABLISHMENT'S TALLOW DRUMS OR DEPOSITED INTO A PLASTIC GARBAGE BAG, TIED SHUT AND PLACED IN A PLASTIC BUCKET WITH A TIGHT SEALING LID FOR DISPOSAL IN THE GARBAGE DUMPSTER. A LOG OF GREASE INTERCEPTOR/TRAP CLEANING MUST BE MAINTAINED, MADE AVAILABLE FOR INSPECTION, AND SUBMITTED TO THE UTILITY AS REQUIRED. IF A GREASE CLEANING SERVICE IS USED, DATED RECEIPTS MUST BE AVAILABLE FOR INSPECTION.
- BEST MANAGEMENT PRACTICES FOR MANAGEMENT OF OIL AND GREASE SHALL BE USED AS FOLLOWS:
 - TRAIN KITCHEN STAFF AND OTHER EMPLOYEES ABOUT HOW THEY CAN HELP ENSURE THESE PRACTICES ARE IMPLEMENTED. DOCUMENT THAT EMPLOYEES HAVE BEEN INFORMED.
 - USE WATER TEMPERATURES LESS THAN 140° F IN ALL SINKS, ESPECIALLY THE PRE-RINSE SINK BEFORE THE MECHANICAL DISHWASHER. ALSO, CONSIDER A LOW-TEMPERATURE SANITIZING RINSE DISHWASHER TO REDUCE EMULSIFIED OILS.
 - USE A 3-COMPARTMENT SINK FOR WARE WASHING. MAKE SURE ALL DRAIN SCREENS ARE INSTALLED AND LINES ARE TRAPPED. BEGIN WITH A HOT WATER (<140° F) ONLY (NO DETERGENT) PRE-RINSE THAT IS TRAPPED TO REMOVE NON-EMULSIFIED OILS AND GREASES FROM WARE WASHING. FOLLOW WITH WASH AND RINSE STEPS. USE PROPER CONCENTRATIONS OF CLEANERS AND DISINFECTANTS AND USE DETERGENTS THAT PROMOTE RAPID OIL/WATER SEPARATION.
 - PRACTICE DRY CLEANUP. REMOVE FOOD WASTE WITH "DRY" METHODS SUCH AS SCRAPING, WIPING, OR SWEEPING BEFORE USING "WET" METHODS. USE FOOD GRADE PAPER TO SOAK UP OIL AND GREASE UNDER FRYER BASKETS AND USE PAPER TOWELS TO WIPE DOWN WORK AREAS. CLOTH TOWELS WILL ACCUMULATE GREASE THAT WILL EVENTUALLY END UP IN YOUR DRAINS FROM TOWEL WASHING/RINSING.
 - PREVENT SPILLS AND REDUCE THE AMOUNT OF OIL AND GREASE REQUIRING CLEAN UP. EMPTY CONTAINERS BEFORE THEY ARE FULL. USE A COVER TO TRANSPORT GREASE TRAP CONTENTS TO THE RENDERING BARREL. PROVIDE EMPLOYEES WITH THE PROPER TOOLS TO TRANSPORT MATERIALS WITHOUT SPILLING.
 - CONTRACT WITH A MANAGEMENT COMPANY TO PROFESSIONALLY CLEAN LARGE HOOD FILTERS. HAND-CLEAN SMALL HOODS WITH SPRAY DETERGENTS AND WIPE DOWN WITH CLOTHS FOR CLEANING. HOOD FILTERS CAN BE EFFECTIVELY CLEANED BY ROUTINELY SPRAYING WITH HOT WATER WITH LITTLE OR NO DETERGENTS OVER THE MOP SINK THAT SHOULD BE CONNECTED TO A GREASE INTERCEPTOR/TRAP. AFTER HOT WATER RINSE (SEPARATELY TRAPPED), FILTER PANELS CAN GO INTO THE DISHWASHER.
 - COLLECT FRYER OIL IN AN OIL-RENDERING TANK FOR DISPOSAL. DO NOT DISCHARGE OIL INTO A GREASE INTERCEPTOR/TRAP.

GREASE INTERCEPTOR (COMMERCIAL)

NOT TO SCALE



STREAM CROSSING PROFILE

NOT TO SCALE

Central Region Herbaceous Riparian Vegetation			
Note: Select a mix of species listed and that match existing vegetation that currently exists along the creek bank.			
Common Name	Scientific Name	Size / Class	Indicator
Hog-Peanut	<i>Amphicarpaea bracteata</i>	herbaceous vine	FAC
Ground-Nut	<i>Aporosa americana</i>	herbaceous vine	FACW
Panicled Aster	<i>Aster lanosolatus</i>	wildflower	FACW
Side-Flowering Aster	<i>Aster lateriflorus</i>	wildflower	FACW-
False Nettle	<i>Boehmeria cylindrica</i>	wildflower	OBL
Blue-Joint Grass	<i>Calamagrostis canadensis</i>	grass	OBL
Emory's Sedge	<i>Carex emoryi</i>	sedge	OBL
Shoreline Sedge	<i>Carex hyalinolepis</i>	sedge	OBL
Lakebank Sedge	<i>Carex lacustris</i>	sedge	OBL
Larger Straw Sedge	<i>Carex normalis</i>	sedge	FACW
Hairy-Fruit Sedge	<i>Carex trichocarpa</i>	sedge	OBL
Fox Sedge	<i>Carex vulpinoidea</i>	sedge	OBL
Wild or Streambank Chervil	<i>Chaerophyllum procumbens</i>	wildflower	FAC+
Northern Sea Oats	<i>Chasmanthium latifolium</i>	grass	FACW
Wood-Reed	<i>Cinna arundinacea</i>	grass	FACW
Honewort	<i>Cryptotaenia canadensis</i>	wildflower	FAC
American Beakgrass	<i>Diarrhena americana</i>	grass	FACU
Wild Cucumber	<i>Echinocystis lobata</i>	herbaceous vine	FACW-
Canada Wild Rye	<i>Elymus canadensis</i>	grass	FAC-
Virginia Wild Rye	<i>Elymus virginicus</i>	grass	FACW-
Riverbank Wild Rye	<i>Elymus riparius</i>	grass	FACW
Spotted Joe-Pye-Weed	<i>Eupatorium maculatum</i>	wildflower	OBL
Bonset	<i>Eupatorium perfoliatum</i>	wildflower	FACW+
White Snakeroot	<i>Eupatorium rugosum</i>	wildflower	FACU
White Avens	<i>Geum canadense</i>	wildflower	FAC
Fowl Manna Grass	<i>Glyceria striata</i>	grass	OBL
False Sunflower	<i>Helopsis helianthoides</i>	wildflower	FAC-
Bottlebrush Grass	<i>Hystrix patula</i>	grass	FACU
Orange Jewelweed	<i>Impatiens capensis</i>	wildflower	FACW
Yellow Jewelweed	<i>Impatiens pallida</i>	wildflower	FACW
Soft Rush	<i>Juncus effusus</i>	rush	OBL
Wood Nettle	<i>Laportea canadensis</i>	wildflower	FACW
Rice Cut Grass	<i>Leersia oryzoides</i>	grass	OBL
White Grass	<i>Leersia virginica</i>	grass	FACW
Great Blue Lobelia	<i>Lobelia siphilitica</i>	wildflower	FACW+
American Bugleweed	<i>Lycopus americanus</i>	wildflower	OBL
Virginia Blue Bells	<i>Mertensia virginica</i>	wildflower	FACW
Hairy Sweet-Cicely	<i>Osmorhiza clyttonia</i>	wildflower	FACU
Switch Grass	<i>Panicum virgatum</i>	grass	FAC+
Wild Blue Phlox	<i>Phlox divaricata</i>	wildflower	FACU
Clearweed	<i>Pilea pumila</i>	wildflower	FACW
Green-Headed Coneflower	<i>Rudbeckia laciniata</i>	wildflower	FACW+
Three-Lobed Coneflower	<i>Rudbeckia triloba</i>	wildflower	FAC-
Clustered Black-Snakeroot	<i>Sanicula odorata</i>	wildflower	FAC+
Dark Green Bulrush	<i>Scirpus atrovirens</i>	bulrush	OBL
Wool-Grass	<i>Scirpus cyperinus</i>	bulrush	OBL
River Bulrush	<i>Scirpus fluviatilis</i>	bulrush	OBL
Drooping Bulrush	<i>Scirpus pendulus</i>	bulrush	OBL
Soft-Stem Bulrush	<i>Scirpus validus</i>	bulrush	OBL
Cup-Plant	<i>Silphium perfoliatum</i>	wildflower	FACW-
Late Goldenrod	<i>Solidago gigantea</i>	wildflower	FACW
Prairie Cordgrass	<i>Spartina pectinata</i>	grass	FACW+
American Gernander	<i>Teucrium canadense</i>	wildflower	FACW-
Stinging Nettle	<i>Urtica dioica</i>	wildflower	FAC+
Blue Vervain	<i>Verbena hastata</i>	wildflower	FACW+
Wingstem	<i>Verbesina alternifolia</i>	wildflower	FACW

20' MIN. OR BEYOND 100-YEAR FLOOD ELEVATION OF BODY OF WATER, WHICHEVER IS GREATER

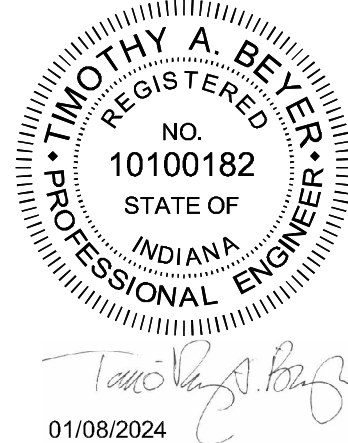
POND OR OTHER SURFACE WATER BODY

SURFACE WATER BODY PLAN

NOT TO SCALE

STREAM CROSSING/SURFACE WATER SEPARATION

NOT TO SCALE



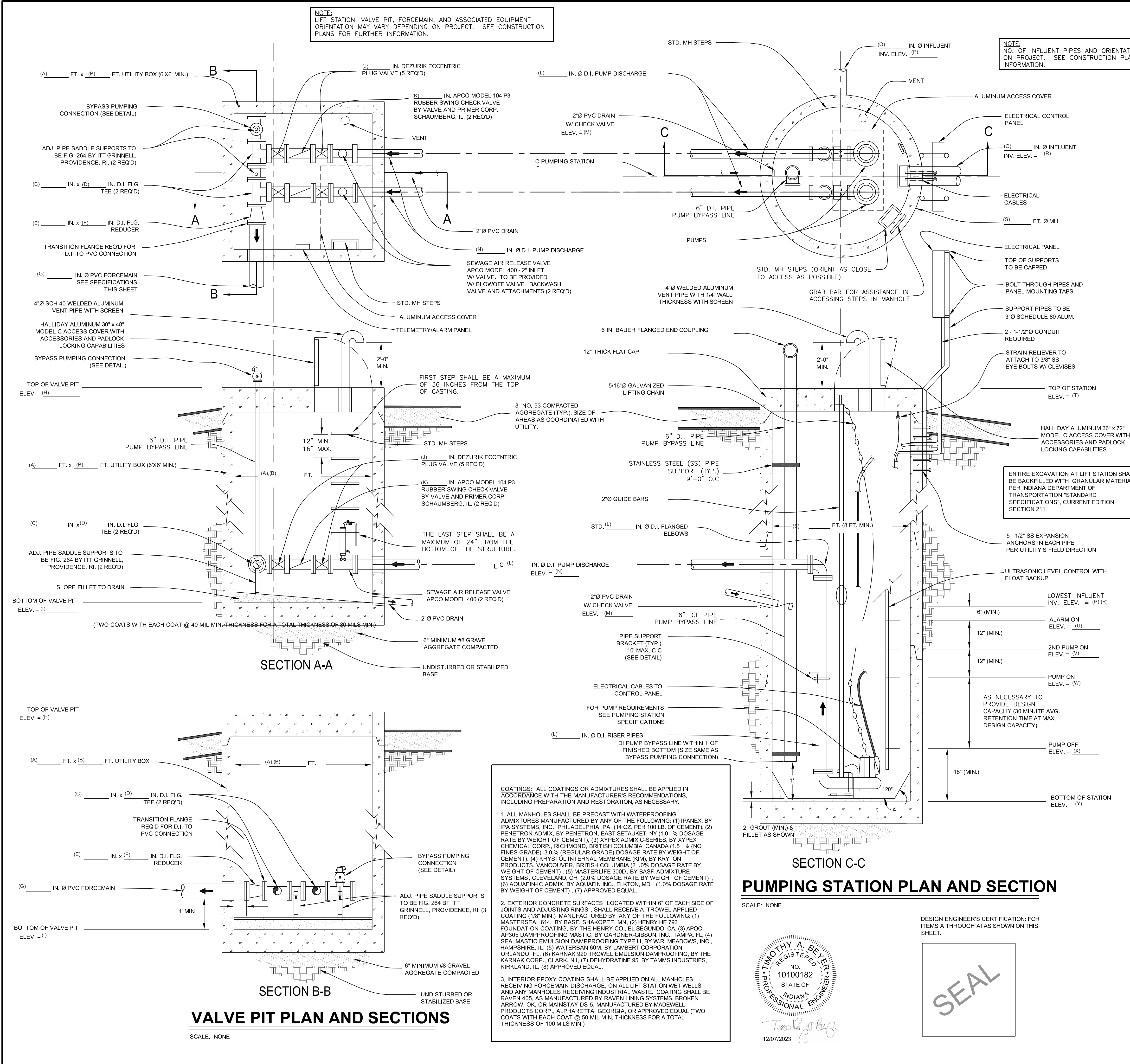
01/08/2024

Timo A. Beyer

PROJECT NAME	PROJECT SHEET NUMBER
	of

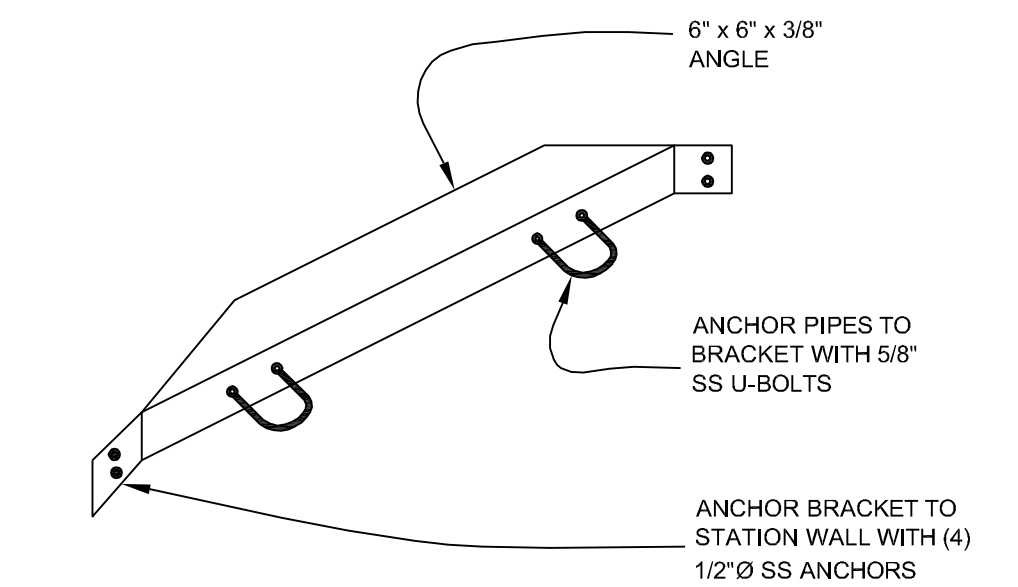
AMERICAN SUBURBAN UTILITIES

(800) 382-5544	HOLEY MOLEY	3350 WEST, 250 NORTH	DATE JAN. 2024
(765) 463-3856	AMERICAN SUBURBAN UTILITIES	WEST LAFAYETTE, INDIANA 47906	SHEET
(765) 463-6664	FIRE DEPT.	SANITARY SEWER	ASU5
(765) 423-9321	SHERIFF	TYPICAL DETAILS and NOTES	



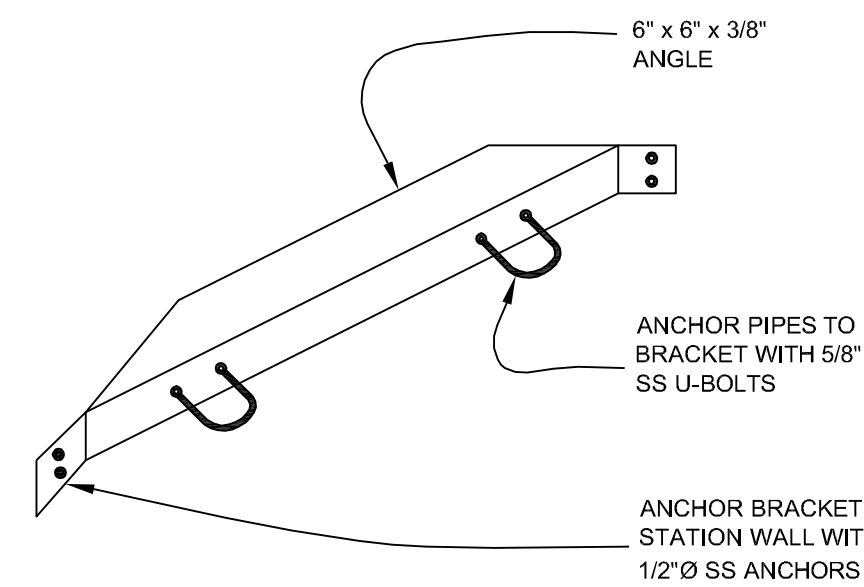
BYPASS PUMPING CONNECTION DETAIL

NOT TO SCALE



PIPE SUPPORT BRACKET DETAIL

NOT TO SCALE



PUMP STATION SPECIFICATIONS

- PUMPING STATION SHALL BE CAPABLE OF PUMPING (AD) GPM AT (AE) TDH. MOTORS SHALL BE (AF) PHASE, (AG) VOLT, (AH) HP, (AI) RPM. PUMPS SHALL BE MANUFACTURED BY FLYGT. A SPARE PUMP AND MOTOR SHALL BE PURCHASED AND PROVIDED TO AMERICAN SUBURBAN UTILITIES.
- LEVEL CONTROL SYSTEM TO BE INSTALLED AND SET AT ELEVATIONS SHOWN. PUMPS SHALL ALTERNATE IN SEQUENCE.
- AUTOMATIC PUMP CONTROL PANEL HAVING A NEMA 4 STAINLESS STEEL ENCLOSURE FOR WEATHERPROOF MOUNTING AND SERVICE SHALL HAVE PADLOCK LOCKING CAPABILITY. THE CONTROL PANEL SHALL INCLUDE AN ALARM LIGHT AND MTIC INDICATOR CONTROLLER. A SPARE CONTROLLER SHALL BE PURCHASED AND PROVIDED TO AMERICAN SUBURBAN UTILITIES.
- TELEMETRY/ALARM PANEL SHALL BE PROCOM SET-8A-PS. INSTALLATION OF THE PANEL SHALL BE COORDINATED WITH AMERICAN SUBURBAN UTILITIES.
- THE ACCESS COVER SHALL BE ALUMINUM AND SHALL INCLUDE THE FRAMEWORK AND NECESSARY APPURTENANCES.
- STAINLESS STEEL PUMP ANCHOR BOLT LOCATION SETTINGS SHALL BE PER THE MANUFACTURER'S RECOMMENDATIONS.
- ALL EXPOSED PIPE JOINTS IN VALVE PIT AND PUMPING STATION TO BE FLANGED.
- FORCEMAIN TO BE PVC PIPE (ASTM D-2241 SDR-21 OR AWWA C-900 DR-25) WITH GASKETED JOINTS, OR HDPE DIPS DR-11. FITTINGS TO BE DUCTILE IRON WITH APPROPRIATE RESTRAINTS BASED ON OPERATING PRESSURE. FORCEMAIN SHALL BE INSTALLED IN ACCORDANCE WITH AWWA C-605, ASTM D-2774, AND MANUFACTURER'S RECOMMENDATIONS, AS APPLICABLE. INNER DIAMETER (I.D.) OF FORCEMAIN SHALL BE MINIMUM SIZE NOTED ON PLANS. FORCEMAINS SHALL NOT BE DESIGNED TO BE LESS THAN 4 INCHES IN DIAMETER. FORCEMAIN TO BE TESTED AT 150 % OF OPERATING PRESSURE.
- ALL INSTALLED PVC/HDPE FORCEMAIN SHALL INCLUDE INSTALLATION OF A 10-GAUGE COATED COPPER WIRE ABOVE THE APPROXIMATE CENTER OF THE PIPE IN ACCORDANCE WITH INSTRUCTIONS PROVIDED BY THE UTILITY'S INSPECTOR.
- LIFT STATION AND VALVE PIT PIPING SHALL BE DUCTILE IRON, FLANGED JOINT. ALL EXPOSED FERROUS SURFACES (EXCLUDING PUMPS) WITHIN THE LIFT STATION AND VALVE VAULT TO BE PAINTED WITH 2 COATS OF COAL TAR EPOXY, 9 MILS.
- STANDBY GENERATOR SHALL BE PROVIDED. TYPE AND INSTALLATION OF GENERATOR SHALL BE COORDINATED WITH AMERICAN SUBURBAN UTILITIES AND SHOWN ON DRAWINGS.
- PRIOR TO INSTALLATION OF THE PUMPING STATION EQUIPMENT, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING EQUIPMENT LAYOUT AND CONTROL AND ALARM SYSTEM, TO AMERICAN SUBURBAN UTILITIES FOR REVIEW AND APPROVAL.

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			of
AMERICAN SUBURBAN UTILITIES			
(800) 382-5544	HOLEY MOLEY	3350 WEST, 250 NORTH WEST LAFAYETTE, INDIANA 47906	DATE DEC. 2023
(765) 463-3856	AMERICAN SUBURBAN UTILITIES		SHEET
(765) 463-6664	FIRE DEPT.		ASU6
(765) 423-9321	SHERIFF		
		DETAILS AND SPECIFICATIONS FOR PUMPING STATION	