

**PRUITT FARMS SUBDIVISION
7705 SEVIERVILLE PIKE
KNOXVILLE, TENNESSEE**

FOR: LEGENDS DEVELOPMENT PARTNERS
P.O. BOX 440
KNOXVILLE, TENNESSEE

ECE SERVICES PROJECT | 26693

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CERTIFICATION OF CONCEPT PLAN BY REGISTERED ENGINEER

I HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER, LICENSED TO PRACTICE
ENGINEERING UND THE LAWS OF THE STATE OF TENNESSEE. I FURTHER CERTIFY THAT
THE PLAN AND ACCOMPANY DRAWINGS, DOCUMENTS AND STATEMENTS CONFORM, TO
THE BEST OF MY KNOWLEDGE, TO ALL APPLICABLE PROVISIONS OF THE KNOXVILLE-KNOX

CERTIFICATION OF CONCEPT PLAN BY REGISTERED ENGINEER

I HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER, LICENSED TO PRACTICE ENGINEERING UND THE LAWS OF THE STATE OF TENNESSEE. I FURTHER CERTIFY THAT THE PLAN AND ACCOMPANY DRAWINGS, DOCUMENTS AND STATEMENTS CONFORM, TO THE BEST OF MY KNOWLEDGE, TO ALL APPLICABLE PROVISIONS OF THE KNOXVILLE-KNOX COUNTY SUBDIVISION REGULATIONS EXCEPT AS HAS BEEN ITEMIZED AND DESCRIBED IN A REPORT FILED WITH THE PLANNING COMMISSION

REGISTERED ENGINEER _____
TENNESSEE LICENSE NO. _____
DATE: _____

SCOPE

SUBDIVISION OF A PARCEL INTO MULTIPLE LOTS. WORK TO INCLUDE SITE GRADING FOR ACCESS ROAD, UTILITY INSTALLATION AND BUILDING SITE.

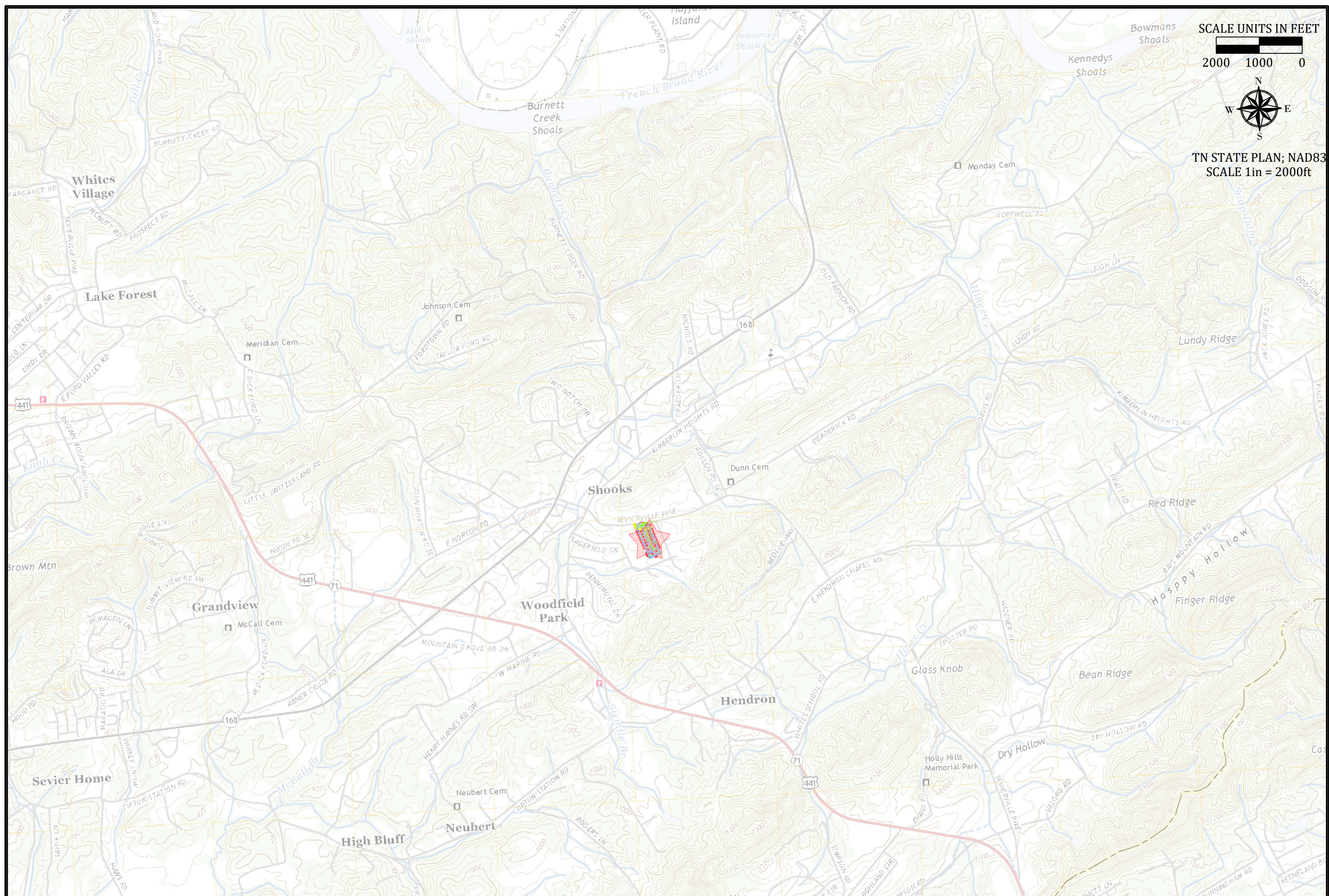
ENVIRONMENTAL & CIVIL ENGINEERING SERVICES

CROSSVILLE | MOUNT JULIET
702 Old Jamestown Hwy
Crossville, TN 38555

Crossville | 931.484.9321
Mount Juliet | 615.863.3237

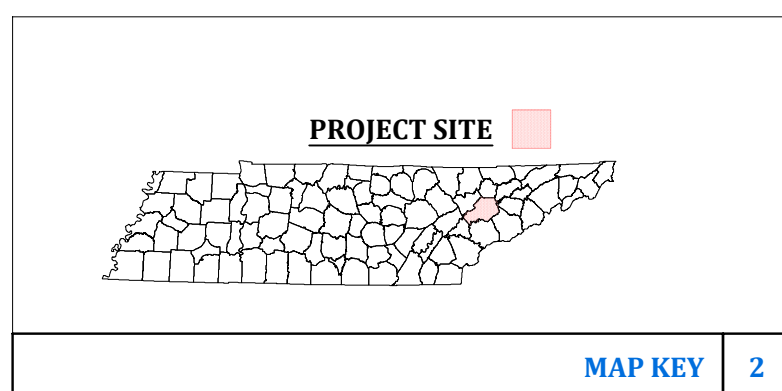
www.ece-engineering.com SHEET REFERENCE

ENGINEERING ♦ GEOTECHNICAL ♦ ENVIRONMENTAL



PROJECT LOCATION MAP:
USGS TOPOGRAPHIC QUADRANGLE, 7.5-MINUTE SERIES - SHOOKS GAP | TENNESSEE - KNOX COUNTY

PROJECT SITE DEEDED ACREAGE - 5.96± ACRES PROJECT AREA - 5.5± ACRES DISTURBANCE AREA - 5.5± ACRES LAT: N 35.911877° LONG: W -83.823941° COUNTY: KNOX, MAP 125, GROUP N/A, PARCEL 038.00 7705 SEVIENVILLE PIKE KNOXVILLE, TENNESSEE	
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	EXISTING PROPERTY LINE		T		EXISTING TELEPHONE OVERHEAD		MH		EXISTING SANITARY SEWER MANHOLE		GR		PROPOSED GUARD RAIL		GW		PROPOSED GUY WIRE
	EXISTING ADJOINING PROPERTY LINE		UG-T		EXISTING TELEPHONE UNDER GROUND		CO		EXISTING SANITARY SEWER CLEAN OUT		1720		PROPOSED SURFACE CONTOUR		GP		PROPOSED GUY POLE
	EXISTING RIGHT OF WAY		CP		EXISTING CONTROL POINT		GT		EXISTING GREASE TRAP		10in CAT		PROPOSED STORM SEWER LINE		GM		PROPOSED NATURAL GAS METER
	EXISTING SET BACK LINE		BM		EXISTING SITE BENCH MARK		SV		EXISTING LOW PRESSURE SANITARY SEWER VALVE		1 PHASE		PROPOSED ELECTRIC OVERHEAD		GV		PROPOSED NATURAL GAS VALVE
	EXISTING CONSTRUCTION EASEMENT		BH		EXISTING BORE HOLE				EXISTING BUILDING		UG-E		PROPOSED ELECTRIC UNDER GROUND		WM		PROPOSED WATER METER
	EXISTING PERMANENT EASEMENT		IPF		EXISTING PROPERTY IRON PIN FOUND				EXISTING BUILDING CONCRETE		10in PVC		PROPOSED WATER LINE		WV		PROPOSED WATER VALVE
	EXISTING FENCE		PC		EXISTING PROPERTY CORNER				EXISTING PAVEMENT LIGHT DUTY		8in PVC		PROPOSED SANITARY SEWER LINE		FH		PROPOSED FIRE HYDRANT ASSEMBLY
	EXISTING FIRE LINE		GRV		EXISTING GRAVE MARKER				EXISTING PAVEMENT HEAVY DUTY		3in LPS		PROPOSED LOW PRESSURE SANITARY SEWER LINE		FRV		PROPOSED WATER PRESSURE REDUCER VALVE
	EXISTING TREE LINE		MB		EXISTING MAILBOX				EXISTING PAVEMENT CONCRETE		SA		PROPOSED SANITARY EFFLUENT LINE		MH		PROPOSED SANITARY SEWER MANHOLE
	EXISTING GUARD RAIL		CB		EXISTING CATCH BASIN				EXISTING ROAD GRAVEL		2in PE		PROPOSED FUTURE SANITARY EFFLUENT LINE		CO		PROPOSED SANITARY SEWER CLEAN OUT
	EXISTING SURFACE CONTOUR		WHW		EXISTING WINGED HEAD WALL								PROPOSED NATURAL GAS LINE		GT		PROPOSED GREASE TRAP
	EXISTING STREAM		EM		EXISTING ELECTRIC METER								PROPOSED FLOW ARROW		SV		PROPOSED SANITARY SEWER VALVE
	EXISTING TOP OF BANK		UP		EXISTING UTILITY POLE		PL		PROPOSED PROPERTY LINE		T		PROPOSED TELEPHONE OVERHEAD				PROPOSED BUILDING CONCRETE
	EXISTING STREAM RIPARIAN BUFFER		LP		EXISTING LIGHT POLE				PROPOSED RIGHT OF WAY		UG-T		PROPOSED TELEPHONE UNDER GROUND				PROPOSED PAVEMENT LIGHT DUTY
	EXISTING STORM WATER LINE		GW		EXISTING GUY WIRE				PROPOSED LIMIT OF PROJECT		BM		PROPOSED SITE BENCH MARK				PROPOSED PAVEMENT HEAVY DUTY
	EXISTING ELECTRIC OVERHEAD		GM		EXISTING NATURAL GAS METER				PROPOSED LIMIT OF DISTURBANCE		BH		PROPOSED BORE HOLE				PROPOSED PAVEMENT CONCRETE
	EXISTING ELECTRIC UNDER GROUND		GV		EXISTING NATURAL GAS VALVE				PROPOSED SET BACK LINE		IPS		PROPOSED IRON PIN SET				PROPOSED ROAD GRAVEL
	EXISTING WATER LINE		WM		EXISTING WATER METER				PROPOSED CONSTRUCTION EASEMENT		CB		PROPOSED CATCH BASIN				PROPOSED PRIMARY ABSORPTION FIELD
	EXISTING SANITARY SEWER LINE		WV		EXISTING WATER VALVE				PROPOSED PERMANENT EASEMENT		WHW		PROPOSED WINGED HEAD WALL				PROPOSED DUPLICATION ABSORPTION FIELD
	EXISTING LOW PRESSURE SANITARY SEWER LINE										EM		PROPOSED ELECTRIC METER				
	EXISTING NATURAL GAS LINE										UP		PROPOSED UTILITY POLE				
	EXISTING FLOW ARROW										LP		PROPOSED LIGHT POLE				

WATER SYSTEM:
KNOXVILLE UTILITIES BOARD
445 SOUTH GAY STREET
KNOXVILLE, TN. 37902
865.524.2911

SANITARY SEWER SYSTEM:
KNOXVILLE UTILITIES BOARD
445 SOUTH GAY STREET
KNOXVILLE, TN. 37902
865.524.2911

NATURAL GAS SYSTEM:
KNOXVILLE UTILITIES BOARD
445 SOUTH GAY STREET
KNOXVILLE, TN. 37902
865.524.2911

ELECTRIC SYSTEM:
KNOXVILLE UTILITIES BOARD
445 SOUTH GAY STREET
KNOXVILLE, TN. 37902
865.524.2911

TELEPHONE/COMMUNICATIONS SYSTEM:
XFINITY
4409 CHAPMAN HIGHWAY
KNOXVILLE, TN 37902
800.934.6489

CABLE TV (CATV) SYSTEM:
KNOXVILLE UTILITIES BOARD
445 SOUTH GAY STREET
KNOXVILLE, TN. 37902
865.524.2911

SHEET SYMBOL LEGEND	1
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LOCAL UTILITY PROVIDERS	1
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MISCELLANEOUS NOTES

1. **REFERENCE STANDARDS.** ALL CONSTRUCTION SHALL COMPLY WITH ALL OF THE APPLICABLE REQUIREMENTS OF THE FOLLOWING DRAWINGS, SPECIFICATIONS, AND STANDARDS:
- A. PROJECT PLANS AND SPECIFICATIONS.
 - B. EXISTING PERMITS IN EFFECT FOR THE PROJECT.
 - C. ANY LOCAL GOVERNING UTILITY REQUIREMENTS OR STANDARDS.
 - D. THE STATE OF TENNESSEE, DEPARTMENT OF ENVIRONMENT AND CONSERVATION, DIVISION OF WATER POLLUTION CONTROL, CHAPTER 4000-40-02 REGULATIONS FOR PLANS, SUBMITTAL, AND APPROVAL; CONTROL OF CONSTRUCTION; CONTROL OF OPERATION, RULES AND REGULATIONS, AND OTHER CRITERIA PUBLISHED BY THE DEPARTMENT.
 - E. THE STATE OF TENNESSEE, DEPARTMENT OF ENVIRONMENT AND CONSERVATION, DIVISION OF WATER RESOURCES, DRINKING WATER SUPPLY CHAPTER 4000-45-01 PUBLIC WATER SYSTEMS, RULES AND REGULATIONS, AND OTHER CRITERIA PUBLISHED BY THE DEPARTMENT.
 - F. THE STATE OF TENNESSEE, DEPARTMENT OF ENVIRONMENT AND CONSERVATION, DIVISION OF WATER POLLUTION CONTROL, CHAPTER 4000-40-16 PUBLIC SEWERAGE SYSTEMS, RULES AND REGULATIONS AND OTHER CRITERIA PUBLISHED BY THE DEPARTMENT.
 - G. INTERNATIONAL BUILDING CODE, LATEST EDITION OR REQUIRED LOCAL AUTHORITY EDITION.
 - H. ACI 304, AMERICAN CONCRETE INSTITUTE GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE.
 - I. ACI 318, AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
 - J. ACI 318, AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
 - K. ACI 350, AMERICAN CONCRETE INSTITUTE CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES AND COMMENTARY.
 - L. ACI 360R, AMERICAN CONCRETE INSTITUTE GUIDE TO DESIGN OF SLABS-ON-GROUND.
 - M. STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
 - N. TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
 - O. NATIONAL ELECTRIC CODE, LATEST EDITION OR REQUIRED LOCAL AUTHORITY EDITION.
- IN THE EVENT OF AN APPARENT DISCREPANCY IN THE ABOVE REQUIREMENTS, THE CONTRACTOR SHALL COMPLY WITH THE MORE STRINGENT REQUIREMENT. THE ENGINEER WILL BE THE JUDGE OF WHICH REQUIREMENT IS MORE STRINGENT.
2. **PERMITS.** THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE PROVISIONS OF ALL PERMITS. NO CONSTRUCTION ACTIVITY SHALL BEGIN BEFORE OBTAINING ALL THE NECESSARY PERMITS UNDER LOCAL, STATE, OR FEDERAL REGULATIONS. SUPPORT THE CONSTRUCTION ACTIVITY DISTURBS MORE THAN ONE ACRE DUE TO THE METHODS OF THE CONTRACTOR. IN THAT CASE, THE CONTRACTOR SHALL OBTAIN A STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY FROM THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION AND SHALL COMPLY WITH ALL APPLICABLE PROVISIONS. THE OWNER, ARCHITECT, OR ENGINEER WILL NOT BE RESPONSIBLE FOR ALL FINES, AND PROJECT COST INCREASES DUE TO THE FAILURE OF THE CONTRACTOR TO OBTAIN OR COMPLY WITH ANY REQUIRED PERMITS. NO CONSTRUCTION ACTIVITY SHALL BEGIN BEFORE OBTAINING THE NECESSARY ENVIRONMENTAL PERMITS UNDER LOCAL, STATE, OR FEDERAL REGULATIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL CURRENT PERMITS AND REGULATIONS FOR THIS PROJECT, INCLUDING A USACE 404 PERMIT AND ARAP PERMIT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS FOR THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE PROVISIONS OF ALL PERMITS. NO CONSTRUCTION ACTIVITY SHALL BEGIN BEFORE OBTAINING ALL THE NECESSARY PERMITS UNDER LOCAL, STATE, OR FEDERAL REGULATIONS. NO EXCAVATION SHALL BE PERFORMED IN FLOWING WATER.
4. **VERIFICATION OF PROJECT CONDITIONS.** THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, HORIZONTAL LOCATIONS, AND VERTICAL ELEVATIONS OR ANY OTHER CONDITIONS THAT ARE EXISTING AND OF THE WORK BEFORE COMMENCING CONSTRUCTION OPERATIONS AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. THE CONTRACTOR'S FAILURE TO IMMEDIATELY NOTIFY THE ENGINEER BEFORE COMMENCING WORK SHALL CONSTITUTE THE CONTRACTOR'S ACCEPTANCE OF THE CONDITION(S) AND RELEASE OF ANY CLAIMS FOR AN ADDITIONAL COST.
5. **MODIFICATIONS.** THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, HORIZONTAL LOCATIONS, AND VERTICAL ELEVATIONS OR ANY OTHER CONDITIONS THAT ARE EXISTING AND OF THE WORK BEFORE COMMENCING CONSTRUCTION OPERATIONS AND IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS OR DISCREPANCIES. THE CONTRACTOR'S FAILURE TO IMMEDIATELY NOTIFY THE ENGINEER BEFORE COMMENCING WORK SHALL CONSTITUTE THE CONTRACTOR'S ACCEPTANCE OF THE CONDITION(S) AND RELEASE OF ANY CLAIMS FOR AN ADDITIONAL COST.
6. **SEE ARCHITECTURAL PLANS FOR DIMENSIONS OF AREAS ADJACENT TO THE BUILDING.**
7. THE CONTRACTOR SHALL ADHERE TO THE SOURCE ORDINANCE OF THE CONTROLLING MUNICIPAL AUTHORITY.
8. THE OWNER REQUESTS THE CONTRACTOR TO SUBMIT A SCHEDULE FOR PROPOSED WORK FOR APPROVAL, BEFORE BEGINNING ANY WORK. THE CONTRACTOR WILL COORDINATE ALL WORK AND WORK SCHEDULES WITH THE OWNER AND THE ENGINEERING.
9. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL ALL MATERIALS AND SUBCONTRACTOR SERVICES UTILIZED FOR THE PROJECT.
10. THE CONTRACTOR WILL MAINTAIN A COPY OF ALL PLANS, PERMITS, AND PROJECT DOCUMENTATION ON THE PROJECT SITE AT ALL TIMES.
11. ALL AGGREGATES SHALL CONFORM TO THE FOLLOWING SIZES OR EQUIVALENT SIZES AS APPROVED BY THE ENGINEER. LABORATORY QUERIES MAY NOT SUPPLY THESE STANDARD SIZES. PLEASE SUBMIT FOR REVIEW AND APPROVAL BASED ON LOCAL AVAILABILITY.

SIZE	NOMINAL SIZES, SQUARE OPENINGS		QUANTITIES FINER THAN EACH LABORATORY SIEVE, SQUARE OPENINGS, PERCENT BY WEIGHT															
	4in	3-1/2in	3in	2-1/2in	2in	1-1/2in	1in	3/4in	1/2in	3/8in	NO. 4	NO. 8	NO. 16	NO. 50	NO. 100			
1	3-1/2	1-1/2	100	90-100	-	25-60	-	0-15	-	0-5	-	-	-	-	-	-	-	-
2	2-1/2	1-1/2	-	-	100	90-100	35-70	0-15	-	0-5	-	-	-	-	-	-	-	-
24	2-1/2	3/4	-	-	100	90-100	-	25-60	-	0-10	0-5	-	-	-	-	-	-	-
3	2	1	-	-	100	90-100	35-70	0-15	-	0-5	-	-	-	-	-	-	-	-
357	2	NO. 4	-	-	100	95-100	-	35-70	-	10-30	-	0-5	-	-	-	-	-	-
4	1-1/2	3/4	-	-	-	100	90-100	20-55	0-15	-	0-5	-	-	-	-	-	-	-
467	1-1/2	NO. 4	-	-	100	95-100	-	35-70	-	10-30	0-5	-	-	-	-	-	-	-
5	1	1/2	-	-	-	100	90-100	20-55	0-10	0-5	-	-	-	-	-	-	-	-
56	1	3/8	-	-	-	100	90-100	40-85	10-40	0-15	0-5	-	-	-	-	-	-	-
57	1	NO. 4	-	-	-	100	95-100	-	25-60	-	0-10	0-5	-	-	-	-	-	-
6	3/4	3/8	-	-	-	100	90-100	20-55	0-15	0-5	-	-	-	-	-	-	-	-
67	3/4	NO. 4	-	-	-	100	90-100	-	20-55	0-10	0-5	-	-	-	-	-	-	-
68	3/4	NO. 4	-	-	-	100	90-100	-	30-65	5-25	0-10	0-5	-	-	-	-	-	-
7	1/2	NO. 4	-	-	-	100	90-100	40-70	0-15	0-5	-	-	-	-	-	-	-	-
78	1/2	NO. 8	-	-	-	100	90-100	40-75	5-25	0-10	0-5	-	-	-	-	-	-	-
8	3/8	NO. 8	-	-	-	100	85-100	10-30	0-10	0-5	-	-	-	-	-	-	-	-
89	3/8	NO. 16	-	-	-	100	90-100	20-55	5-30	0-10	0-5	-	-	-	-	-	-	-
9	NO. 4	NO. 16	-	-	-	100	85-100	10-40	0-10	0-5	-	-	-	-	-	-	-	-
10	NO. 4	0(1)	-	-	-	100	85-100	-	-	-	-	-	-	-	10-30	-	-	-

AGGREGATE SIZES ARE NOTED IN THE PLANS AND DETAIL SECTIONS.

STORMWATER EPSC NOTES

1. THE STORMWATER POLLUTION PREVENTION PLAN IS NOT INCLUDING HEREIN BUT PRESENTED AS A SEPARATE PLAN, AS REQUIRED, AND BECOMES PART OF THESE ENGINEERING AND CONSTRUCTION PLANS.
2. ALL PROPOSED STORMWATER PRACTICES SHOWN ON THIS PLAN ARE IN ACCORDANCE WITH AND A PART OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THIS PROJECT. REFERENCE THE SWPPP FOR ANY CLARIFICATION OR ADDITIONAL CONTROLS THAT MAY NEED TO BE ADDED TO THESE PLANS.
3. NO VARIATION, MODIFICATION, OR ALTERATION SHALL BE MADE FROM THIS PLAN WITHOUT THE EXPRESS APPROVAL OF THE ENGINEER.
4. THE FOLLOWING APPLICATIONS AND PERMIT REQUESTS SHALL BE OBTAINED FOR THE PROPOSED PROJECT:
- a. TDEC CONSTRUCTION GENERAL PERMIT
 - b. THE OWNER/CONTRACTOR SHALL BE RESPONSIBLE FOR APPLYING FOR AND OBTAINING ALL REQUIRED PERMITS FOR THE PROJECT, INCLUDING THOSE ALREADY RECEIVED AND ANY FUTURE PERMIT. THE OWNER/CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE PROVISIONS OF ALL PERMITS. NO CONSTRUCTION ACTIVITY SHALL BEGIN BEFORE OBTAINING ALL REQUIRED PERMITS UNDER LOCAL, STATE, OR FEDERAL REGULATIONS.
 - c. ALL ADJACENT PROPERTIES, WATER FEATURES, AND RELATED NATURAL RESOURCES SHALL BE KEPT FREE OF DEPOSITS OR DISCHARGES OF SOIL, SEDIMENT, HAZARDOUS SUBSTANCES, OR CONSTRUCTION-RELATED MATERIAL AT THE CONSTRUCTION SITE.
 - d. THE CONTRACTOR IS RESPONSIBLE FOR ANY REQUIRED EPSC INSPECTIONS AND COMPLIANCE COSTS.
 - e. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A COPY OF THE EPSC INSPECTION FORMS ON A MONTHLY BASIS.
 - f. THE CONTRACTOR IS REQUIRED TO PREPARE OBJECTIVE CRITERIA WATER QUALITY MONITORING PLAN, EVEN IF NO STORMWATER PERMIT IS REQUIRED.
 - g. EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED PER TDEC CONSTRUCTION GENERAL PERMIT REQUIREMENTS. THE CONTROL MEASURES SHOWN IN THE DRAWINGS ARE THE MINIMUM REQUIRED, AND ADDITIONAL MEASURES MAY BE NECESSARY AS SITE CONDITIONS DICTATE. THE CONTRACTOR SHALL PROVIDE ADDITIONAL EROSION CONTROL DEVICES AS NEEDED AT NO EXTRA COST.
 - h. EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSTALLED PRIOR TO DISTURBANCE OF EXISTING GROUND COVER. THEY MUST REMAIN IN PLACE AND FUNCTIONAL THROUGHOUT THE CONSTRUCTION PERIOD.
 - i. NATURAL VEGETATION SHOULD BE RETAINED AND PROTECTED WHERE FEASIBLE.
 - j. ANY STORMWATER FLOWING OUTSIDE THE PROJECT SITE SHALL BE DIVERTED SO IT WILL NOT HAVE TO BE MANAGED AS PART OF THE PROJECT STORMWATER MEASURES.
 - k. ALL TOPSOIL TO BE STRIPPED FROM THE PROJECT SITE SHALL BE STOCKPILED AND IMMEDIATELY SEEDED. STOCKPILE SHALL BE SURROUNDED WITH SILT FENCE AND HAVE A SHALLOW TRENCH AROUND THE PILE TO CAPTURE RUNOFF.
 - l. ALL CUT SLOPES AND EMBANKMENTS SHALL BE TO BE IMMEDIATELY LAID BACK AND STABILIZED AS FOLLOWS:
 - a. GRADE TO THE FINISHED SLOPE.
 - b. SCABRED.
 - c. TOPSOIL PLACEMENT WITH NOT LESS THAN FOUR INCHES OF SUITABLE TOPSOIL MATERIAL.
 - d. SEED WITH HYBRID KENTUCKY 31 AT A RATE OF 6-8 LBS/1000 SF.
 - e. MULCHED AT A RATE OF 100 LBS/1000 SF AND ANCHOR PROPERLY.
 - f. ALL EMBANKMENTS ARE TO BE GRADED AND SEEDED IMMEDIATELY UPON BEING LAID BACK.
 - m. ON ALL EMBANKMENT FILL SLOPES, TOPSOIL SHALL BE STRIPPED AT LEAST FIVE (5) FEET WIDER THAN REQUIRED FOR THE EMBANKMENT TOE OF THE SLOPE. A PROTECTIVE BERM OF TOPSOIL SHALL BE LEFT IN THIS AREA, RUNNING PARALLEL TO THE CONTOURS TO RESTRICT DRAINAGE RUNOFF. THE TOPSOIL BERM SHALL BE SEEDED AS REQUIRED FOR STOCKPILES.
 - n. PAVED AND GRAVEL SURFACES SHALL BE KEPT CLEAN AT ALL TIMES.
 - o. ALL STORM DRAINAGE OUTLETS SHALL BE STABILIZED AS REQUIRED BEFORE THE DISCHARGE POINTS BECOME OPERATIONAL.
 - p. DUST SHALL BE CONTROLLED BY SPRINKLING OR OTHER APPROVED METHODS AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
 - q. APPLY TEMPORARY SEEDING WHENEVER GRADING OPERATIONS ARE TEMPORARILY HALTED FOR OVER 14 DAYS, AND FINAL GRADING OF EXPOSED SURFACES IS TO BE COMPLETED WITHIN ONE YEAR. APPLY TEMPORARY SEEDING TO STEEP SLOPES (GREATER THAN OR EQUAL TO 3:1) WHENEVER GRADING OPERATIONS ARE TEMPORARILY HALTED FOR OVER SEVEN (7) DAYS. THE FINAL GRADING OF EXPOSED SURFACES IS TO BE COMPLETED WITHIN ONE YEAR. APPLY TEMPORARY SEEDING TO SOIL STOCKPILES.
 - r. APPLY PERMANENT SEEDING WHENEVER GRADING OPERATIONS ARE COMPLETED, AND ALL CONSTRUCTION OPERATIONS WILL NOT IMPACT THE DISTURBANCE AREA. APPLY PERMANENT SEEDING TO ALL NON-CONSTRUCTION AREAS THAT SHOW SIGNS OF EXCESSIVE EROSION.
 - s. PERMANENT SEEDING SHALL BE DROUGHT-TOLERANT, HYBRID KENTUCKY 31, JAGUAR, LANCER, REBEL, FALCON II, OR OTHER BRANDS. SEED AT A RATE OF 6-8 LBS/1000 SF AND USE A SLOW-RELEASE STARTER FERTILIZER WITH 1 LBS/1000 SF NITROGEN. IF GRADING IS PERFORMED DURING THE WINTER MONTHS, THE SEED MIXTURE SHALL BE SUPPLEMENTED WITH WINTER RYE OR OTHER APPROPRIATE VARIETY TO ASSURE STABILIZATION DURING THE WINTER SEASON.
 - t. MULCH WITH STRAW AT A RATE OF 100 LBS/1000 SF OVER THE SEEDED AREA AND ANCHORED IN A SUITABLE MANNER.
 - u. SUPPOSE THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION EXPOSED SURFACE TO REMOVE THE MAJORITY OF DIRT OR MUD. IN THAT CASE, 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.
 - v. ALL MATERIAL SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
 - w. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF SITE CONSTRUCTION POLLUTION PREVENTION PRACTICES THROUGHOUT THE LIFE OF THE PROJECT.
 - x. UPON COMPLETE STABILIZATION OF THE SITE, SILT FENCES AND OTHER TEMPORARY SILT BARRIERS SHALL BE REMOVED OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES.
 - y. THE CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA, THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES: CONCRETE TRUCK WASHOUT AREA, OFFICE TRAILERS, AND TOILET FACILITIES.
 - z. CURRENT VERSIONS OF THE STORMWATER POLLUTION PREVENTION PLAN, THE NOTICE OF INTENT, AND THE NOTICE OF COVERAGE SHALL BE KEPT ON-SITE FOR THE DURATION OF THE PROJECT.
11. ALL UNDISTURBED AREAS, INCLUDING ARCHAEOLOGICAL SITES AND STREAM BUFFERS, SHALL BE FIELD MARKED AND KEPT FREE OF CONSTRUCTION EQUIPMENT.
12. PROPOSED STORMWATER CONTROL DITCHES, POND, DETENTION BASINS, AND OTHER STRUCTURES SHALL BE CLEANED OUT OF ANY SILTATION UPON COMPLETION OF GRADING OPERATIONS AND THE ESTABLISHMENT OF PERMANENT VEGETATION AND EROSION CONTROLS.
13. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN SITE STABILIZATION HAS BEEN ACHIEVED, SO A TDEC NOTICE OF TERMINATION CAN BE SUBMITTED, IF APPLICABLE.
14. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED UPON THE STABILIZATION, COMPLETION OF THE PROJECT, AND RECEIPT OF A TDEC NOTICE OF TERMINATION.

DEMOLITION NOTES

1. THIS PROJECT INVOLVES THE PARTIAL DEMOLITION OF AN EXISTING SITE BEFORE THE COMMENCEMENT OF CONSTRUCTION AND THE TOTAL DEMOLITION OF AN EXISTING SITE BEFORE THE COMPLETION OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL IMPLEMENT ALL TEMPORARY UTILITIES, PAVING, SITE CONTROL, AND COORDINATION NECESSARY TO COMPLETE THE PROJECT AND PROVIDE THE STAGING NECESSARY.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE OFF AND CAP OF EXISTING UTILITIES BEFORE ANY DEMOLITION.
3. ALL SITE DEMOLITION ACTIVITIES AND DEBRIS DISPOSAL SHALL COMPLY WITH THE CONTRACT SPECIFICATIONS AND APPLICABLE LOCAL, STATE, AND FEDERAL STANDARDS AND REGULATIONS.
4. THE CONTRACTOR SHALL NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPANCY AND USED BY THE OWNER DURING THE DEMOLITION OF SITE IMPROVEMENTS. IF A UTILITY INTERFERENCE IS REQUIRED, THE CONTRACTOR SHALL COORDINATE THE INTERFERENCE WITH THE OWNER, AND PROPER NOTIFICATION WILL BE ISSUED. NOTIFICATIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL RESTORE ANY STRUCTURE, UTILITY, PAVEMENT, CURBS, SIDEWALK, LANDSCAPED AREA, OR OTHER IMPROVEMENTS WITHIN THE CONSTRUCTION LIMITS DISTURBED OR DAMAGED DURING DEMOLITION ACTIVITIES.

EARTHWORK NOTES

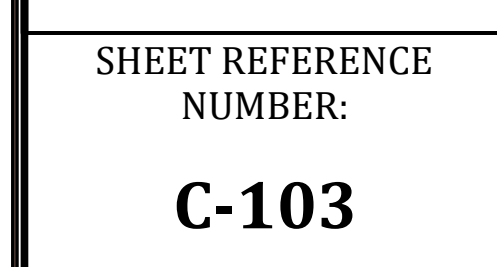
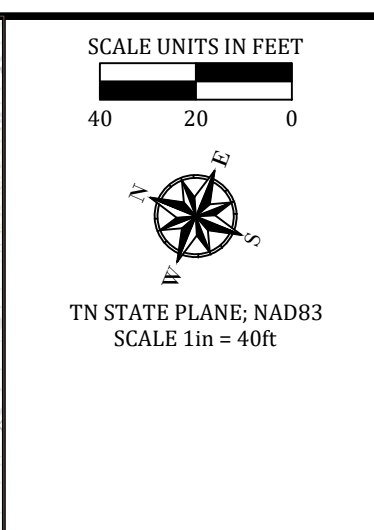
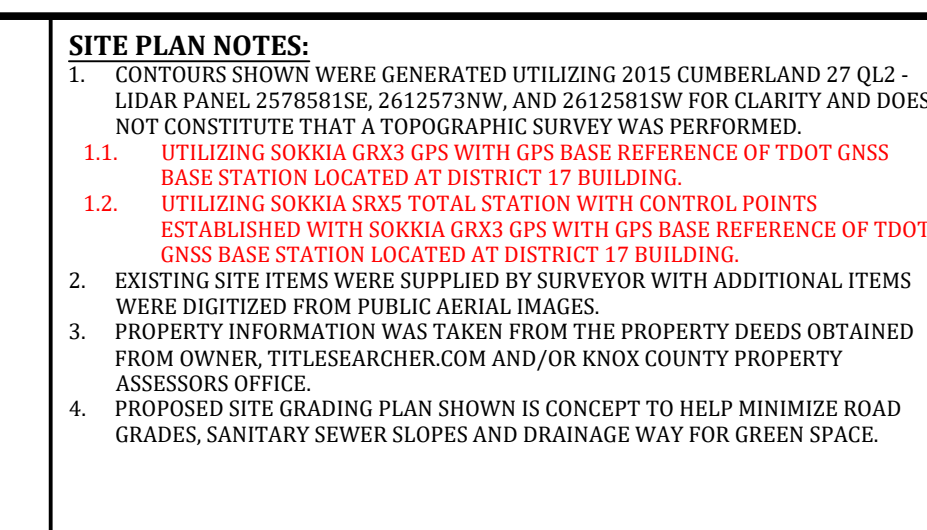
1. **ONE-CALL NOTIFICATION:** THE CONTRACTOR SHALL HAVE A COPY OF APPROVED PLANS AND SPECIFICATIONS ON-SITE AT ALL TIMES. THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS WITH UTILITIES IN THE VICINITY OF THE PROJECT AND THE TENNESSEE ONE-CALL SYSTEM PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL PROTECT FROM DAMAGE ALL UTILITIES THAT ARE TO REMAIN. THE PRESENCE OR ABSENCE OF ANY UTILITIES FROM THIS PLAN DOES NOT GUARANTEE THAT SUCH UTILITIES ARE OR ARE NOT PRESENT ON THE SITE OR THE LOCATION OF SUCH UTILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY CONFLICT BETWEEN EXISTING STRUCTURES OR UTILITIES AND THE PROPOSED WORK BEFORE BEGINNING THE WORK. THE CONTRACTOR WILL BE REQUIRED TO RAISE/LOWER DRAINAGE STRUCTURES, PROVIDE IF THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER AND THE SEWER IS CONSTRUCTED OF MATERIALS AND WITH JOINTS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION AND SHALL BE TESTED TO ASSURE WATER-TIGHTNESS PRIOR TO BACKFILL. WHEN CROSSING UNDER NORMAL CONDITIONS, THE WATER MAIN SHALL BE LAID TO PROVIDE A SEPARATION OF AT LEAST 18 INCHES BETWEEN THE BOTTOM OF THE WATER MAIN AND THE TOP OF THE SEWER. IF SUCH A CROSSING IS NOT POSSIBLE, THE ENGINEER SHALL BE NOTIFIED AND SHALL DIRECT AN ALTERNATIVE METHOD TO PERFORM THE CROSSING.
2. **UNDERGROUND UTILITY LOCATIONS:** AS SHOWN, ARE BASED UPON OBSERVABLE EVIDENCE FOUND IN THE FIELD, AND UTILITY COMPANY RECORDS WHERE AVAILABLE. UTILITY LOCATIONS ARE APPROXIMATE AND ARE NOT GUARANTEED. THE CONTRACTOR MAY EXIST IN TENNESSEE, IT IS A REQUIREMENT PER THE "UNDERGROUND UTILITY DAMAGE PREVENTION ACT" THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS NO LESS THAN THREE NOR MORE THAN TEN WORKING DAYS OF THEIR INTENT TO EXCAVATE. A LIST OF THESE UTILITIES CAN BE OBTAINED FROM THE COUNTY REGISTER OF DEEDS. THOSE UTILITIES PARTICIPATING IN THE TENNESSEE ONE-CALL SYSTEM CAN BE NOTIFIED BY CALLING 1-800-353-1111.
3. **UTILITY ABANDONMENT:** ALL UTILITIES SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER TO BE PERMANENTLY ABANDONED SHALL BE REMOVED COMPLETELY OR SERVED AND PLUGGED WITH APPROPRIATE FITTINGS AND CONCRETE KICKERS ACCORDING TO THE REQUIREMENTS OF THE LOCAL GOVERNING UTILITY. THE CONTRACTOR SHALL COORDINATE ALL RELOCATION AND ABANDONMENT WITH THE UTILITY BEFORE BEGINNING ANY WORK.
4. **SAFETY EXCAVATION PRACTICES:** THE CONTRACTOR SHALL COMPLY WITH ALL REGULATORY REQUIREMENTS FOR THE EXCAVATION OF MATERIALS. ALL TEMPORARY EXCAVATION FOR FOOTINGS, PITS, PIPES, OR OTHER PURPOSES SHALL BE SHORDED, BRACED IN ACCORDANCE WITH OSHA REQUIREMENTS. PROPER PROTECTION FROM TRAFFIC SHALL BE PROVIDED AT ALL EXCAVATIONS ADJACENT OR NEAR ROADWAYS AND TRAFFIC AREAS THAT ARE IN USE.
5. **UNAUTHORIZED EARTHWORK:** DO NOT REMOVE MATERIALS, TOPSOIL, OR SUITABLE FILL MATERIAL FROM THE SITE WITHOUT THE WRITTEN PERMISSION OF THE OWNER UNLESS SPECIFICALLY DESIGNATED TO BE REMOVED IN THE PLANS OR SPECIFICATIONS.
6. **DISPOSAL/BORROW SITES:** THE OWNER, THROUGH THE ENGINEER, WILL DESIGNATE ANY ON-SITE LOCATIONS AND PROVIDE AN OFF-SITE LOCATION FOR DISPOSAL OF ANY SOIL. IN THE ABSENCE OF THE OWNER DESIGNATING ADEQUATE AREAS ON-SITE OR OFF-SITE TO ACCOMMODATE SOIL VOLUMES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE BORROW SOIL AND THE PROPER DISPOSAL OF ANY EXCESS SOIL.
7. **PROTECTION OF STRUCTURES AND SITE:** THE CONTRACTOR SHALL PROTECT ALL EXISTING BUILDINGS, UTILITIES, FENCES, STRUCTURES, AND OTHER IMPROVEMENTS TO REMAIN AND SHALL RETURN THE SITE, WORK AREAS, AND PROPERTY TO THE CONDITION IT WAS IN OR BETTER UPON COMPLETION OF THE WORK. ANY EXISTING STRUCTURES, UTILITIES, OR OTHER IMPROVEMENTS THAT ARE DAMAGED SHALL BE REPAIRED OR REPLACED TO THEIR ORIGINAL CONDITION OR BETTER BEFORE WORK CONTINUES AT NO COST TO THE OWNER.
8. **DRAINAGE:** MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES AT ALL LOCATIONS AT ALL TIMES.
9. THE SUBGRADE HAS BEEN PROPERLY PREPARED, SOIL OR SHOT ROCK FILL MAY BE PLACED IN ORDER TO ATTAIN THE DESIRED FINAL GRADES. IN GENERAL, ANY NON-ORGANIC COHESIVE SOIL WITH A LIQUID LIMIT LESS THAN 45% AND A PLASTICITY INDEX LESS THAN 20, AND A MAXIMUM PARTICLE SIZE OF 4 INCHES IS SATISFACTORY FOR SOIL FILLS AS WELL AS ANY GRANULAR SOIL.
10. ALL SURFACE PAVEMENTS, VEGETATION, TOPSOIL, AND OTHER ORGANIC MATERIAL OR MISCELLANEOUS FILL AND DEBRIS SHOULD BE REMOVED FROM THE CONSTRUCTION AREAS BEFORE THE BUILDING OR PLACING OF FILLS. IN PLACE BY WALKING OVER THE FILL WITH A 2-8 DOZER OR 9-13 TRACK LOADER A MINIMUM OF 3 TO 5 PASSES WITH THE TRACKS OVERLAPPING 50% DURING EACH PASS. SHOT ROCK FILL SHOULD BE "CHOKED OFF" BY REDUCING THE MAXIMUM PARTICLE SIZE AS THE FILL APPROACHES THE FINAL SUBGRADE ELEVATIONS. IT IS RECOMMENDED THAT THE MAXIMUM PARTICLE SIZE NOT EXCEED FOUR INCHES IN THE LAST THREE FEET OF FILL. THE FILL PLACEMENT SHOULD BE OBSERVED AND DOCUMENTED BY A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER. FILL PADS SHOULD BE CONSTRUCTED SO THAT THE COMPACTED SURFACE EXTENDS HORIZONTALLY BEYOND THE OUTSIDE FOOTING EDGES AT LEAST 10 FEET AND BEYOND PAVEMENTS AND WALKS AT LEAST 5 FEET. IN THE EVENT, THIS SPECIFICATION CONFLICTS WITH ANOTHER REQUIREMENT IN THE PROJECT PLANS OR GEOTECHNICAL REPORT, THE MORE STRINGENT WILL GOVERN.
11. FOR PORER AND TIMELY CONSTRUCTION OF THE FILLS, SOILS SHOULD BE PLACED AT OR NEAR THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE SPECIFIED PROCTOR TEST. THE MOISTURE CONTENT OF THE FILLS SOILS SHALL BE WITHIN PLUS OR MINUS 5 PERCENT OF THE OPTIMUM MOISTURE CONTENT. SUITABLE EQUIPMENT FOR EITHER AERATING OR ADDING WATER TO THE FILL MATERIALS SHOULD BE AVAILABLE AS THE SOIL MOISTURE AND WEATHER CONDITIONS DICTATE.
12. CONTINUOUS REVIEW OF ANY CONSTRUCTION OF THE SOILS RELATED PHASES OF THIS PROJECT IS RECOMMENDED TO BE PERFORMED. OTHERWISE, THE ENGINEER ASSUMES NO RESPONSIBILITY FOR CONSTRUCTION COMPLIANCE WITH THESE PROJECT CONCEPTS, SPECIFICATIONS, OR RECOMMENDATIONS. AS A PART OF THIS REVIEW, FIELD DENSITY TESTS SHOULD BE PERFORMED AS FREQUENTLY AS NECESSARY TO ASSIST IN THE EVALUATION OF THE FILL WITH RESPECT TO THE ABOVE RECOMMENDATIONS.

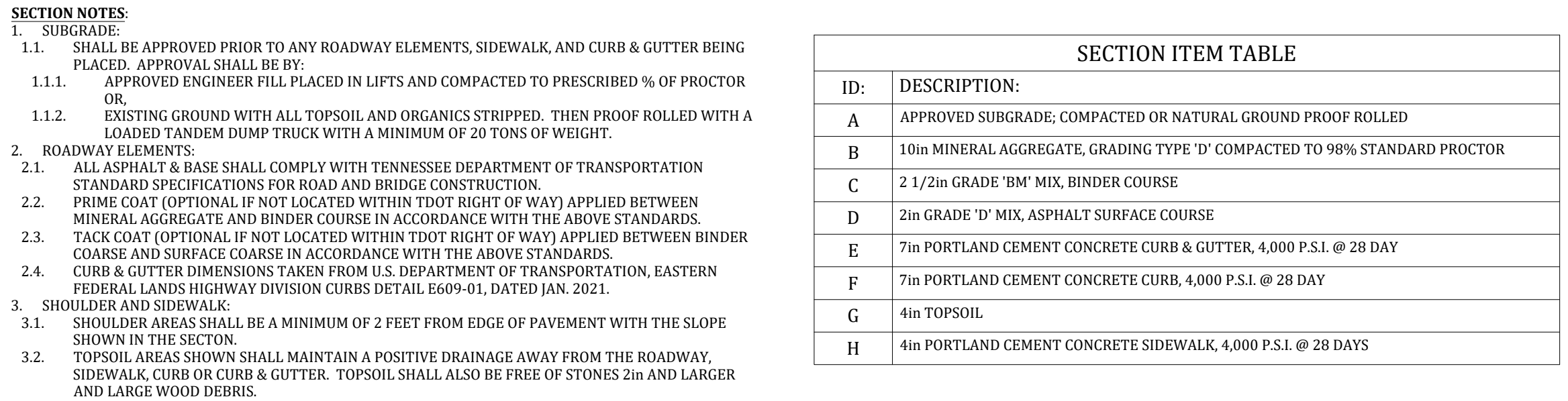
SITE PREPARATION

1. ALL SURFACE PAVEMENTS, VEGETATION, TOPSOIL, AND OTHER ORGANIC MATERIAL OR MISCELLANEOUS FILL AND DEBRIS SHOULD BE REMOVED FROM THE CONSTRUCTION AREAS PRIOR TO THE BUILDING OR PLACING OF FILLS. ANY FORMER BUILDINGS, FOUNDATIONS, SEPTIC TANKS, SURFACE DISPOSAL FIELDS AND UNDERGROUND UTILITIES WITHIN THE PROPOSED PROJECT AREA SHOULD BE REMOVED.
- 1.1. PROPER SITE PREPARATION IS REQUIRED TO MITIGATE SOME RISK OF EXCESSIVE OR NON-UNIFORM SETTLEMENT. THE RISK CAN BE ELIMINATED ONLY BY REMOVAL AND REPLACEMENT, OR REMOVAL AND RE-COMPACT OF ANY MATERIAL NOT SUITABLE FOR STRUCTURAL LOADING. ANY UNDOCUMENTED FILLS ENCOUNTERED GREAT RISK BY VARYING ZONES OF FILL MATERIAL OR COMPACTION WITH SOFT, LOOSE, OR UN-COMPACTED MATERIAL, LIKELY, ALL TOPSOIL, ENCOUNTER ORGANIC SOIL, OR ORGANIC DEBRIS MUST BE OVER EXCAVATED AND REMOVED.
- 1.2. AFTER THE COMPLETION OF THE STRIPPING OPERATIONS AND PREPARATION OF ANY PROPOSED FILL AREA AND THE REMOVAL OF ANY CUT AREAS, THE EXPOSED SUBGRADE AREAS SHOULD BE PROOF ROLLED. PROOF ROLLING IS BEST ACHIEVED DURING REASONABLY DRY WEATHER USING A LOADED TANDDEM AXLE, RUBBER TIRE DUMP TRUCK, OR SIMILAR APPROVED VEHICLE. WEIGHTING AT LEAST 20-TONS, TRAVERSING THE SITE IN TWO PERPENDICULAR DIRECTIONS UNDER THE OBSERVATION OF ECE SERVICES PERSONNEL. THE UNSUITABLE ZONES IDENTIFIED THROUGH THIS PROOF ROLL TEST SHALL BE OVER-EXCAVATED TO ENSURE COMPLETED REMOVAL OF THE UNDESIRABLE MATERIAL AND THEN BE REPLACED WITH APPROVED FILL MATERIALS AS DESCRIBED IN THIS REPORT.
- BUILDING FOUNDATION RECOMMENDATIONS**
1. FOUNDATIONS FOR THE PROPOSED STRUCTURE WILL BE LOCATED IN AREAS OF STIFF RESIDUAL CLAY SOILS. OUR FIELD AND LABORATORY TESTS INDICATE THE NATURAL, IN-SITU MATERIALS PRESENT ON THIS SITE WILL BE SATISFACTORY FOR THE SUPPORT OF THE PROPOSED BUILDING AND SECONDARY STRUCTURES. HOWEVER, THE PRESENCE OF WEAKER SOIL LAYERS WITH HIGH MOISTURE CONTENTS BELOW PART OF THE NORTHWEST CORNER OF THE PROPOSED STRUCTURE WOULD TEND TO INDUCE LARGER SETTLEMENTS AND DIFFERENTIAL SETTLEMENTS THAN WOULD BE DESIRABLE FOR THIS PROJECT. WE WOULD RECOMMEND REMOVAL AND REPLACEMENT OF THE SOILS IDENTIFIED IN THIS AREA OF THE STRUCTURE AND ANY OTHER MATERIALS ENCOUNTERED WITH SOFT CONSISTENCY OR HIGH MOISTURE LEVELS.
2. BASED ON THE SURFACE CONDITIONS OBSERVED DURING OUR FIELD AND LABORATORY INVESTIGATION, A SHALLOW FOUNDATION SYSTEM MAY BE UTILIZED FOR THE PROPOSED STRUCTURE. WE THEREFORE RECOMMEND THE FOOTING BE DESIGNED FOR A NET ALLOWABLE SOIL BEARING PRESSURE OF UP TO 2,500 POUNDS PER SQUARE FOOT (PSF) AND CONSIST OF A "FLOATING SLAB" TYPE CONSTRUCTION IN WHICH THE ENTIRE SLAB AND FOUNDATION SYSTEM BE CONSTRUCTED OF INTEGRAL CONCRETE CONSTRUCTION SO AS TO ACT AS A SINGLE FOUNDATION SLAB. POST TENSIONING OR OTHER ADEQUATE REINFORCING MAY BE UTILIZED TO MAINTAIN AN INTEGRAL STRUCTURE THAT IS ADEQUATELY STIFF SO AS TO DISTRIBUTE THE FORCES. GOOD SITE DRAINAGE AND CONTROLS WILL BE NECESSARY TO MAINTAIN A STABLE MOISTURE CONTENT IN THE UNDERLYING SOILS.
3. ALL EXTERIOR FOOTINGS SHOULD ALSO BE PLACED AT A MINIMUM DEPTH OF 1.5 FEET OR GREATER BELOW FINISHED EXTERIOR GRADE FOR FROST PROTECTION. INTERIOR FOOTINGS MAY BE PLACED AT A NOMINAL DEPTH PROVIDED THEY REST ON FIRM NATURAL SOIL OR ENGINEERED FILL. IF ANY SOFT, WET, ORGANIC OR LOOSE SOIL, OR ANY OLD FILL OR DEBRIS IS ENCOUNTERED AT THE DESIGN FOUNDATION ELEVATION, THE EXCAVATIONS SHOULD BE EXTENDED DOWNWARD SO THAT THE FOOTINGS REST ON FIRM SOILS.
4. ISOLATED SPREAD FOOTINGS SHALL BE A MINIMUM OF 24-INCHES WIDE TO REDUCE THE POSSIBILITY OF PUNCHING SHEAR FAILURE.
5. THE ABOVE STATED RECOMMENDED BEARING VALUE SHOULD BE CONSIDERED AN UPPER LIMIT. ANY VALUE LESS THAN THAT LISTED ABOVE WILL BE ACCEPTABLE FOR THE FOUNDATION SYSTEM, BUT WE RECOMMEND THE VARIOUS FOUNDATION SECTIONS ALL BE DESIGNED USING THE SAME VALUE TO MINIMIZE DIFFERENTIAL SETTLEMENTS WITHIN THE NEW STRUCTURE. USING THE VALUE GIVEN, PREDICTED TOTAL SETTLEMENT WITHIN THE BUILDING IS ESTIMATED TO BE LESS THAN 1.0 INCHES WITH DIFFERENTIAL SETTLEMENTS BEING LESS THAN 75 PERCENT OF THE TOTAL.
6. NO STRUCTURAL FOOTINGS SHOULD BE LOCATED WITHIN 20 FEET OF THE TOP OR BOTTOM OF ANY SLOPE THAT EXCEEDS 10% GRADE AT THE SITE. OUR REPORT DOES NOT INCLUDE ANY EVALUATION AS TO THE STRUCTURAL CONDITION, STRUCTURAL CAPABILITY, OR STABILITY OF ANY OF THE RETAINING WALLS AT THE SITE. OUR RECOMMENDATION FOR EXCAVATION SLOPES AT THE SITE SHOULD BE FOLLOWED. THEREFORE, EVEN IF THE SLOPE IS NOT REMOVED ABOVE BUCKMAN WAY, NO BUILDING FOUNDATIONS SHOULD BE LOCATED WITHIN 20 FEET OF WHERE THE TOP OR TOP OF A SLOPE MEETING OUR RECOMMENDATIONS WOULD BE IF THEY HAD BEEN PROPERLY CONSTRUCTED AND FOLLOWED OUR OWN RECOMMENDATIONS.
7. WE RECOMMEND THE GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE TEST ALL FOOTING EXCAVATIONS TO BE SURE THAT ANY EXCESSIVELY LOOSE, SOFT OR OTHERWISE UNSUITABLE MATERIALS ARE REMOVED AND THAT THE SUBGRADE SOILS ARE SATISFACTORY FOR FOUNDATION SUPPORT. AT THE TIME OF TESTING, IT MAY BE NECESSARY TO MAKE HAND AUGER BORINGS OR TO CONDUCT POCKET PENETROMETER OR OTHER TESTS IN THE BASE OF THE FOUNDATION EXCAVATION. THE NECESSARY DEPTH OF TESTING WILL BE ESTABLISHED IN THE FIELD.
8. EXPOSURE TO WEATHER OFTEN REDUCES THE FOUNDATION SUPPORT CAPABILITIES, THIS NECESSITY REMEDIAL MEASURES PRIOR TO CONCRETE PLACEMENT. IF POSSIBLE, ALL FOOTING CONCRETE SHOULD BE POURED THE SAME DAY THE EXCAVATION IS MADE. IF THIS IS NOT PRACTICAL, THE SOILS EXPOSED IN THE BASE OF ALL EXCAVATIONS SHOULD BE PROTECTED AGAINST ANY DETRIMENTAL CHANGE IN CONDITIONS SUCH AS FROM DISTURBANCE, RAIN, AND FREEZING. SURFACE RUN-OFF WATER SHOULD BE DRAINED AWAY FROM ALL EXCAVATIONS AND NOT ALLOWED TO POND. A LEAN CONCRETE MUD MAT WITH A THICKNESS OF 2 TO 3-INCHES MAY BE UTILIZED TO PROTECT EXPOSED SUBGRADE IF THE OPENED EXCAVATIONS CANNOT BE COMPLETED THE SAME DAY THEY ARE OPEN.
- 8.1. EXAMPLE: OUR FIELD AND LABORATORY TESTS INDICATE THE NATURAL, IN-SITU MATERIALS PRESENT ON THIS SITE WILL NOT BE SATISFACTORY FOR THE SUPPORT OF THE PROPOSED BUILDING AND SECONDARY STRUCTURES. THE PRESENCE OF WEAKER SOIL LAYERS WITH HIGH MOISTURE CONTENTS JUST BELOW THE PROPOSED FOUNDATION ELEVATIONS OF THE BASEMENT FLOOR WOULD TEND TO INDUCE LARGER SETTLEMENTS AND DIFFERENTIAL SETTLEMENTS THAN WOULD BE DESIRABLE FOR THIS PROJECT. WE THEREFORE RECOMMEND THE FOOTING BE DESIGNED FOR A NET ALLOWABLE SOIL BEARING PRESSURE OF UP TO 3,000 POUNDS PER SQUARE FOOT (PSF) AND CONSIST OF A "FLOATING SLAB" TYPE CONSTRUCTION IN WHICH THE ENTIRE SLAB AND FOUNDATION SYSTEM BE CONSTRUCTED OF INTEGRAL CONCRETE CONSTRUCTION SO AS TO ACT AS A SINGLE FOUNDATION SLAB. POST TENSIONING OR OTHER ADEQUATE REINFORCING MAY BE UTILIZED TO MAINTAIN AN INTEGRAL STRUCTURE THAT IS ADEQUATELY STIFF SO AS TO DISTRIBUTE THE FORCES. GOOD SITE DRAINAGE AND CONTROLS WILL BE NECESSARY TO MAINTAIN A STABLE MOISTURE CONTENT IN THE UNDERLYING SOILS.
9. FOR THE ABOVE STATED RECOMMENDED BEARING VALUE, ALL EXISTING SOIL AND ROCK UNDERLYING THE ENTIRE BUILDING FOOTPRINT WILL NEED TO BE REMOVED DOWN TO A MINIMUM OF 5 FEET BELOW THE FOOTING ELEVATION. BORINGS INDICATE THERE MAY BE ROCK WITHIN THE PROPOSED FOOTINGS AND SLAB AREAS THAT WILL HAVE TO BE REMOVED. THESE SOILS SHOULD THEN BE REPLACED IN ACCORDANCE WITH THE RECOMMENDATIONS IN THIS REPORT FOR FILL PLACEMENT AND COMPACTION USING A SHOT ROCK FILL.
10. THE READER IS CAUTIONED TO READ THE RECOMMENDATIONS IN THIS REPORT FOR EXCAVATION SAFETY. IT IS BELIEVED THAT ADEQUATE SHORING OF THE EXISTING BUILDING FOUNDATION CANNOT BE ACHIEVED OUR FIRM MAY BE CONTACTED FOR RECOMMENDATIONS TO ADDRESS THIS MATTER.
11. ALL EXTERIOR FOOTINGS SHOULD ALSO BE PLACED AT A MINIMUM DEPTH OF 1.5 FEET OR GREATER BELOW FINISHED EXTERIOR GRADE FOR FROST PROTECTION. INTERIOR FOOTINGS MAY BE PLACED AT A NOMINAL DEPTH PROVIDED THEY REST ON FIRM NATURAL SOIL OR ENGINEERED FILL.
12. IF ANY SOFT, WET, ORGANIC OR LOOSE SOIL, OR ANY OLD FILL OR DEBRIS IS ENCOUNTERED AT THE DESIGN FOUNDATION ELEVATION, THE EXCAVATIONS SHOULD BE EXTENDED DOWNWARD SO THAT THE FOOTINGS REST ON FIRM SOILS. FOUNDATION SYSTEM, BUT WE RECOMMEND THE VARIOUS FOUNDATION SECTIONS ALL BE DESIGNED USING THE SAME VALUE TO MINIMIZE DIFFERENTIAL SETTLEMENTS WITHIN THE NEW STRUCTURE. USING THE VALUE GIVEN, PREDICTED TOTAL SETTLEMENT WITHIN THE BUILDING IS ESTIMATED TO BE LESS THAN 1.5 INCHES WITH DIFFERENTIAL SETTLEMENTS BEING LESS THAN 75 PERCENT OF THE TOTAL.
13. NO STRUCTURAL FOOTINGS SHOULD BE LOCATED WITHIN 20 FEET OF THE TOP OR BOTTOM OF ANY SLOPE THAT EXCEEDS 10% GRADE AT THE SITE.
14. WE RECOMMEND THE GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE TEST ALL FOOTING EXCAVATIONS TO BE SURE THAT ANY EXCESSIVELY LOOSE, SOFT OR OTHERWISE UNSUITABLE MATERIALS ARE REMOVED AND THAT THE SUBGRADE SOILS ARE SATISFACTORY FOR FOUNDATION SUPPORT. AT THE TIME OF TESTING, IT MAY BE NECESSARY TO MAKE HAND AUGER BORINGS OR TO CONDUCT POCKET PENETROMETER OR OTHER TESTS IN THE BASE OF THE FOUNDATION EXCAVATION. THE NECESSARY DEPTH OF TESTING WILL BE ESTABLISHED IN THE FIELD.
15. IF POSSIBLE, ALL FOOTING CONCRETE SHOULD BE POURED THE SAME DAY THE EXCAVATION IS MADE. IF THIS IS NOT PRACTICAL, THE SOILS EXPOSED IN THE BASE OF ALL EXCAVATIONS SHOULD BE PROTECTED AGAINST ANY DETRIMENTAL CHANGE IN CONDITIONS SUCH AS FROM DISTURBANCE, RAIN, AND FREEZING. SURFACE RUN-OFF WATER SHOULD BE DRAINED AWAY FROM ALL EXCAVATIONS AND NOT ALLOWED TO POND.

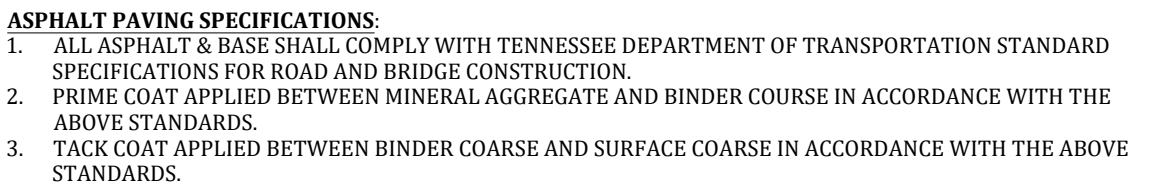
PAVEMENT RECOMMENDATIONS

1. PAVEMENT THICKNESS DESIGN IS DEPENDENT UPON THE ANTICIPATED TRAFFIC CONDITIONS DURING THE LIFE OF THE PAVEMENT, SUBGRADE AND PAVING MATERIAL CHARACTERISTICS, AND CLIMATIC CONDITIONS OF THE REGION. THE ACTUAL PAVEMENT PERFORMANCE IS HIGHLY DEPENDENT UPON PROPER PREPARATION OF THE SUBGRADE SOILS, COMPACTION OF ANY NEW FILL, AND THE TYPES OF SOILS USED. THE FOLLOWING PARAGRAPHS DISCUSS THE SUBGRADE CHARACTERISTICS USED IN THE FORMULATION OF OUR DESIGN RECOMMENDATIONS AND THE DESIGN THICKNESS FOR EACH TYPE OF PAVEMENT.
2. BASED ON THE SURFACE CONDITIONS OBSERVED DURING OUR FIELD AND LABORATORY INVESTIGATION, A SHALLOW FOUNDATION SYSTEM MAY BE UTILIZED FOR THE PROPOSED STRUCTURE. WE THEREFORE RECOMMEND THE FOOTING BE DESIGNED FOR A NET ALLOWABLE SOIL BEARING PRESSURE OF UP TO 2,500 POUNDS PER SQUARE FOOT (PSF) AND CONSIST OF A "FLOATING SLAB" TYPE CONSTRUCTION IN WHICH THE ENTIRE SLAB AND FOUNDATION SYSTEM BE CONSTRUCTED OF INTEGRAL CONCRETE CONSTRUCTION SO AS TO ACT AS A SINGLE FOUNDATION SLAB. POST TENSIONING OR OTHER ADEQUATE REINFORCING MAY BE UTILIZED TO MAINTAIN AN INTEGRAL STRUCTURE THAT IS ADEQUATELY STIFF SO AS TO DISTRIBUTE THE FORCES. GOOD SITE DRAINAGE AND CONTROLS WILL BE NECESSARY TO MAINTAIN A STABLE MOISTURE CONTENT IN THE UNDERLYING SOILS.
3. FOR THE ABOVE STATED RECOMMENDED BEARING VALUE, ALL EXISTING SOIL AND ROCK UNDERLYING THE ENTIRE BUILDING FOOTPRINT WILL NEED TO BE REMOVED DOWN TO A MINIMUM OF 5 FEET BELOW THE FOOTING ELEVATION. BORINGS INDICATE THERE MAY BE ROCK WITHIN THE PROPOSED FOOTINGS AND SLAB AREAS THAT WILL HAVE TO BE REMOVED. THESE SOILS SHOULD THEN BE REPLACED IN ACCORDANCE WITH THE RECOMMENDATIONS IN THIS REPORT FOR FILL PLACEMENT AND COMPACTION USING A SHOT ROCK FILL.
10. THE READER IS CAUTIONED TO READ THE RECOMMENDATIONS IN THIS REPORT FOR EXCAVATION SAFETY. IT IS BELIEVED THAT ADEQUATE SHORING OF THE EXISTING BUILDING FOUNDATION CANNOT BE ACHIEVED OUR FIRM MAY BE CONTACTED FOR RECOMMENDATIONS TO ADDRESS THIS MATTER.
11. ALL EXTERIOR FOOTINGS SHOULD ALSO BE PLACED AT A MINIMUM DEPTH OF 1.5 FEET OR GREATER BELOW FINISHED EXTER

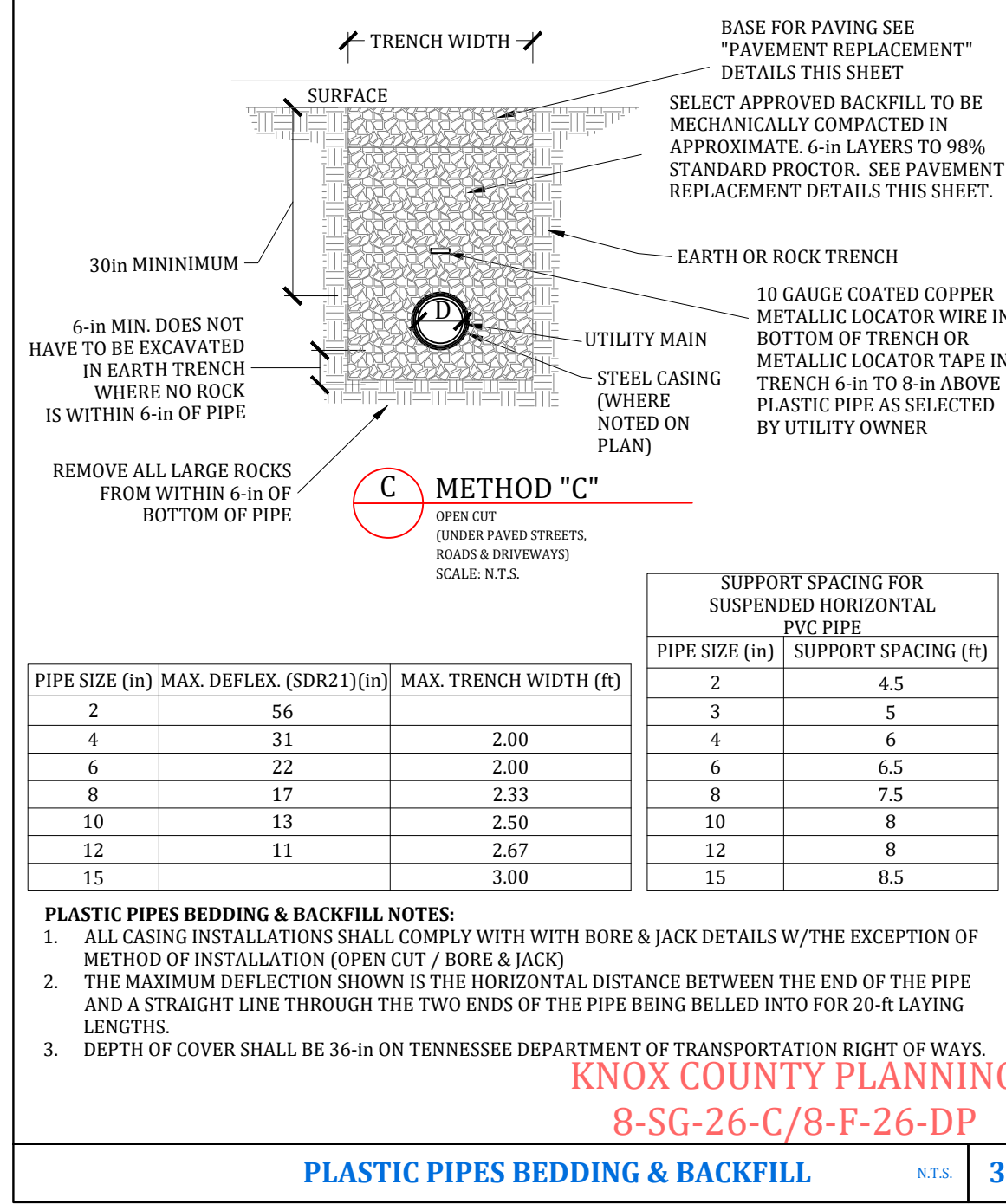
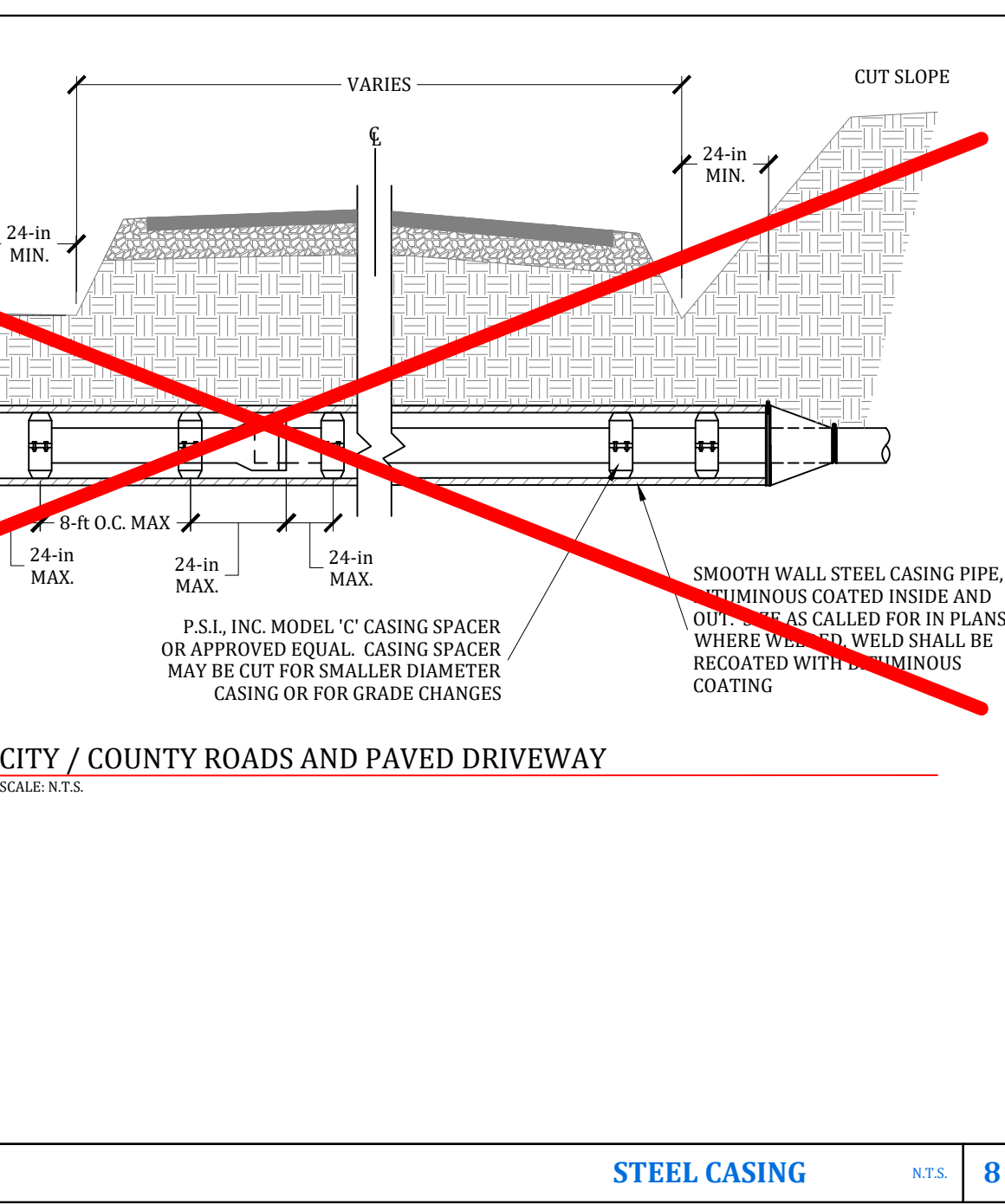
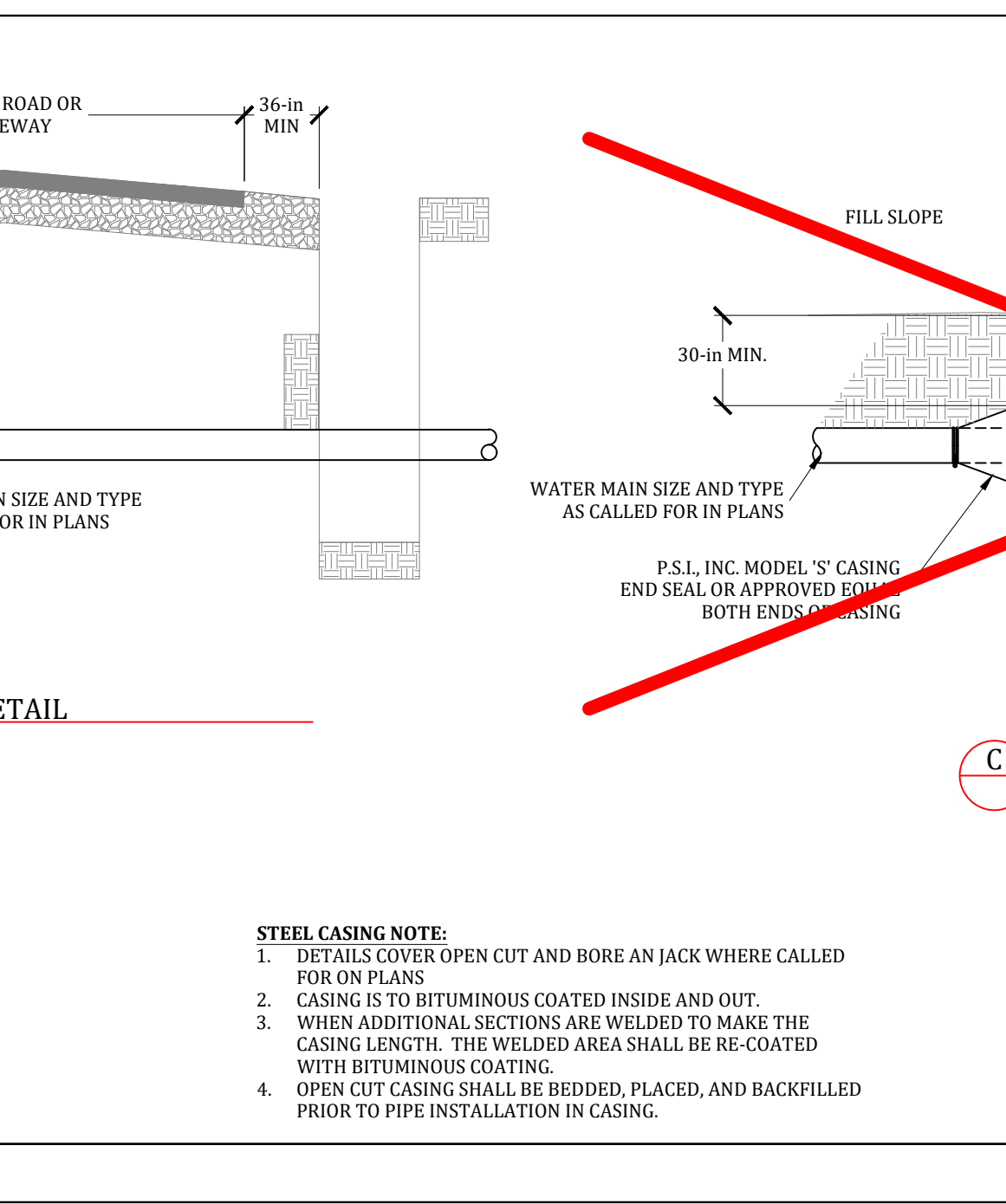
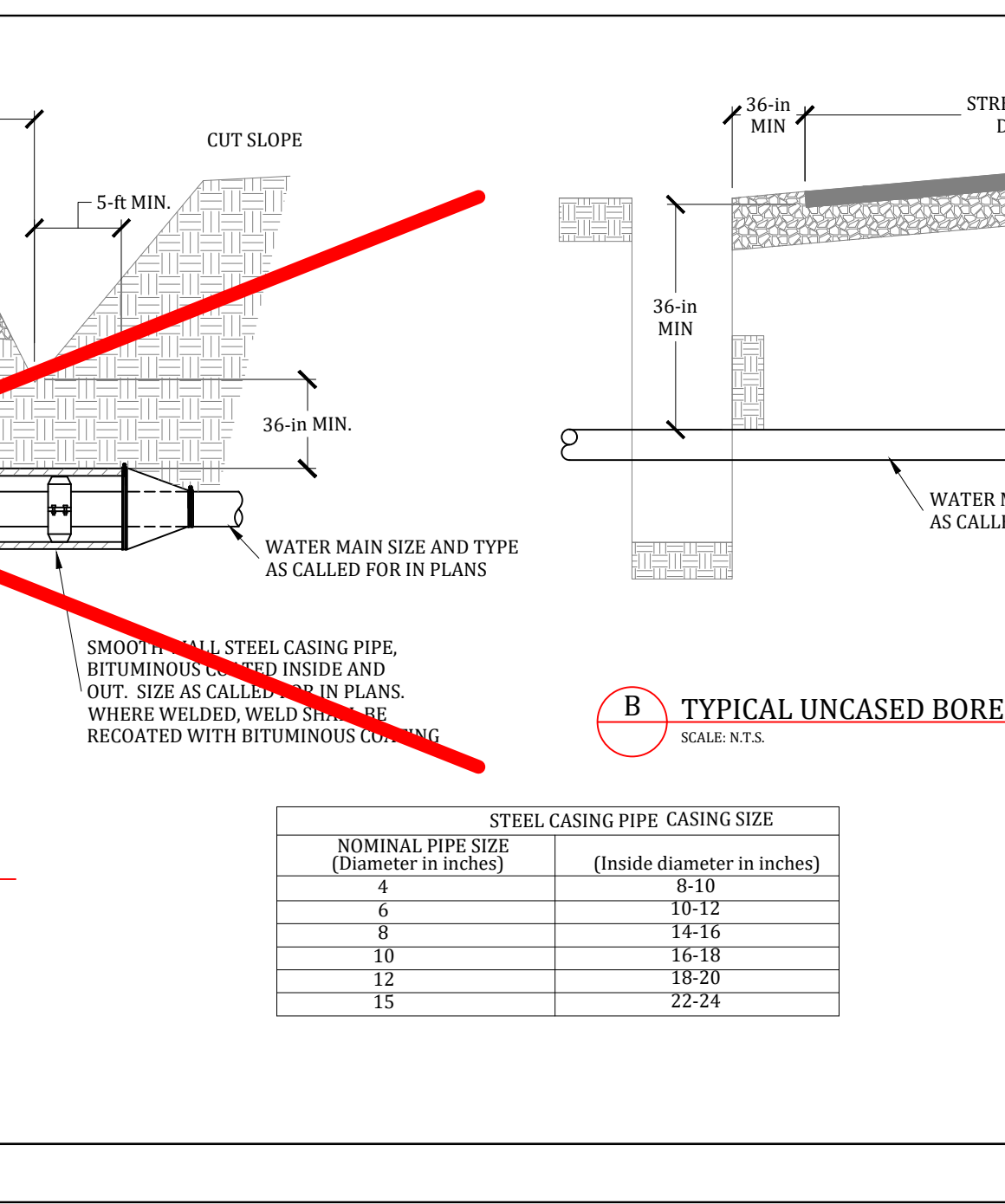
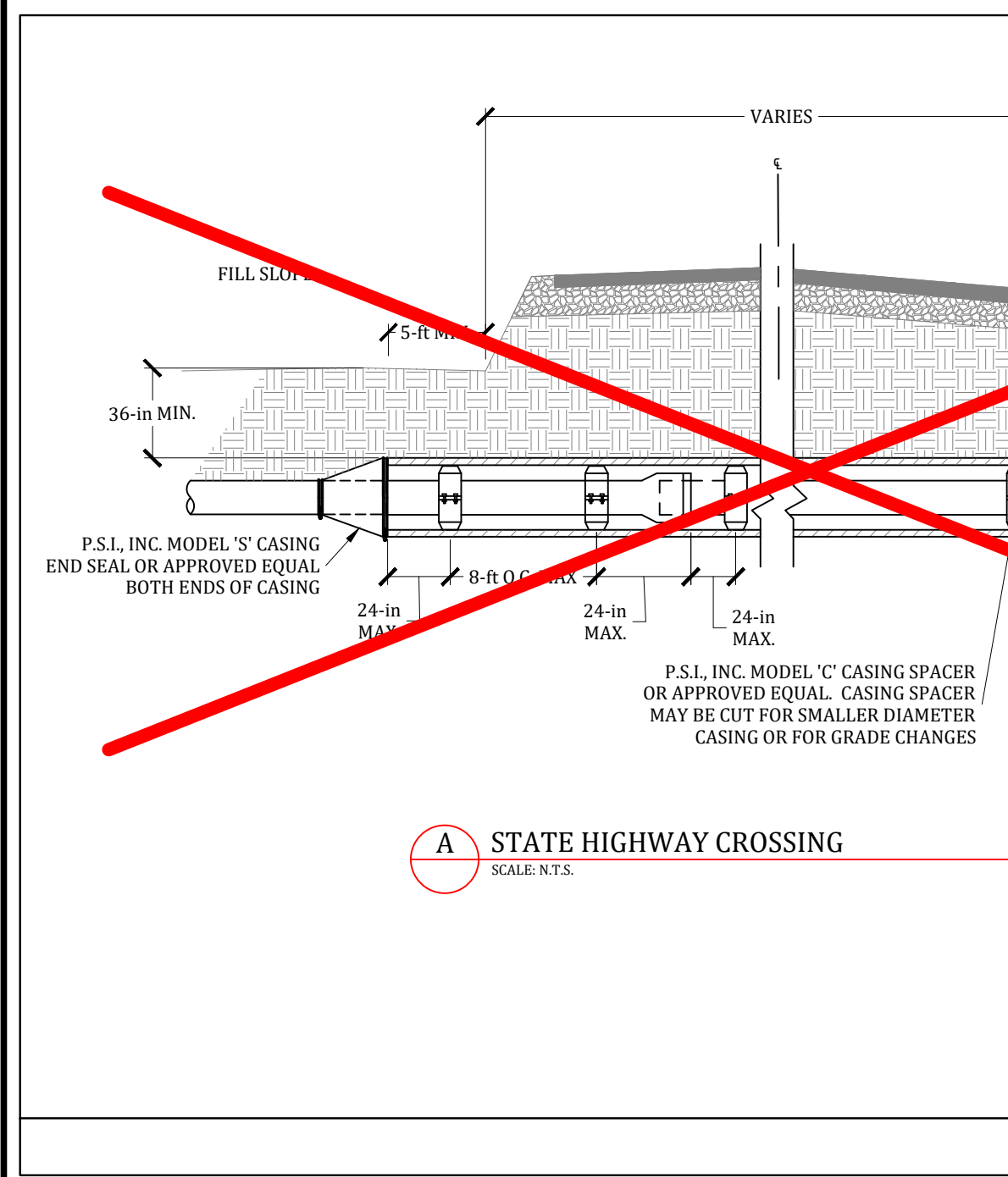
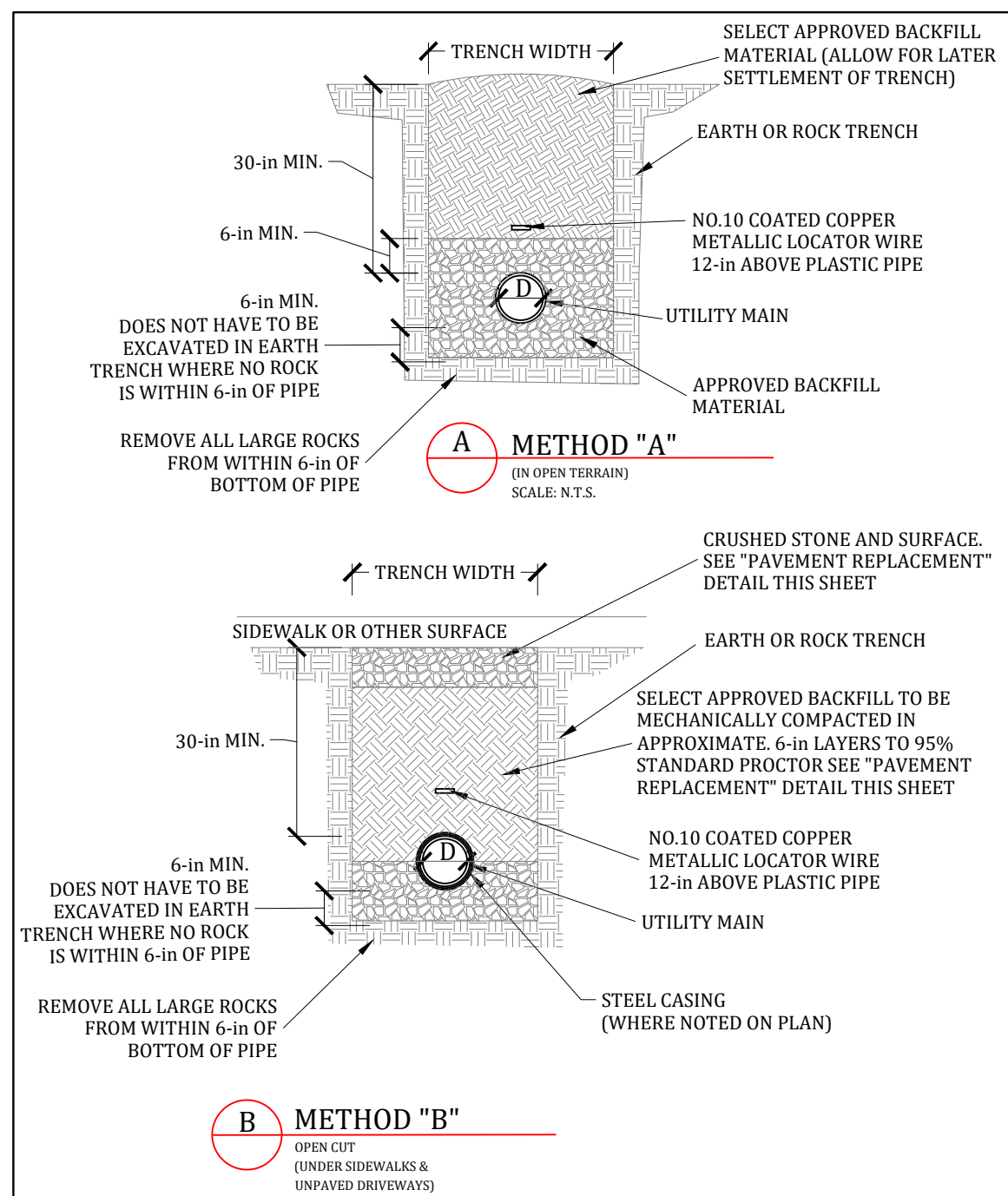
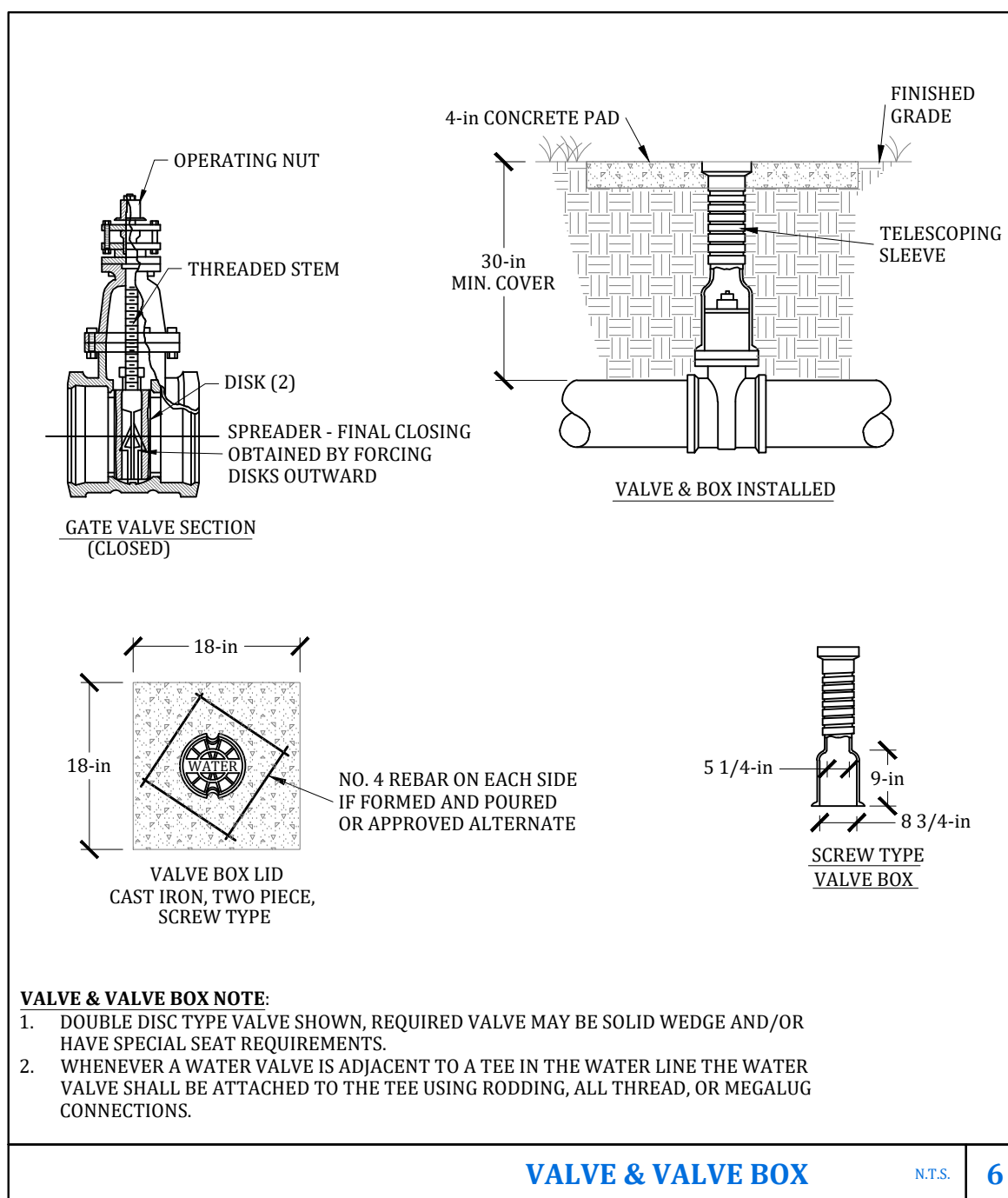
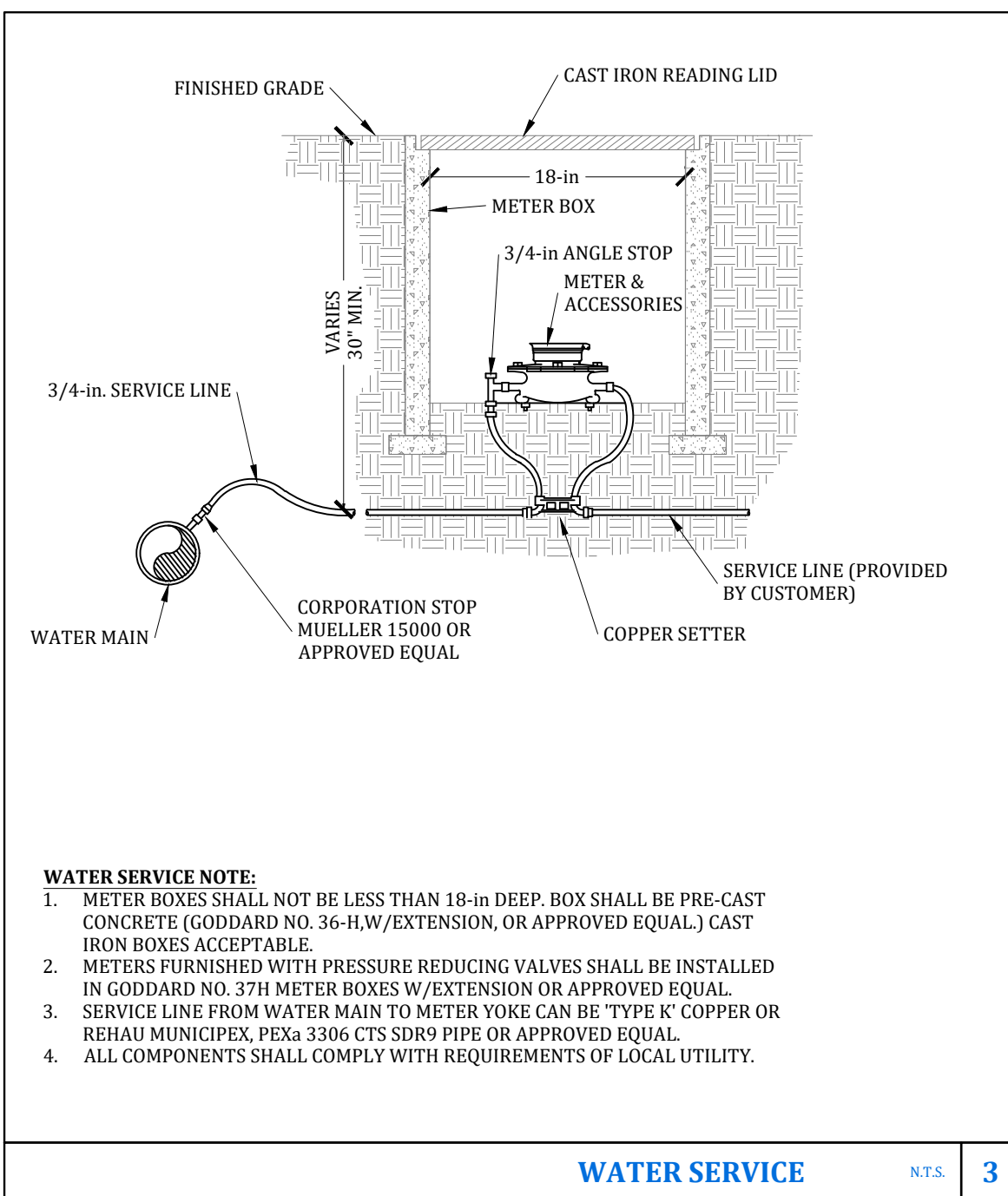
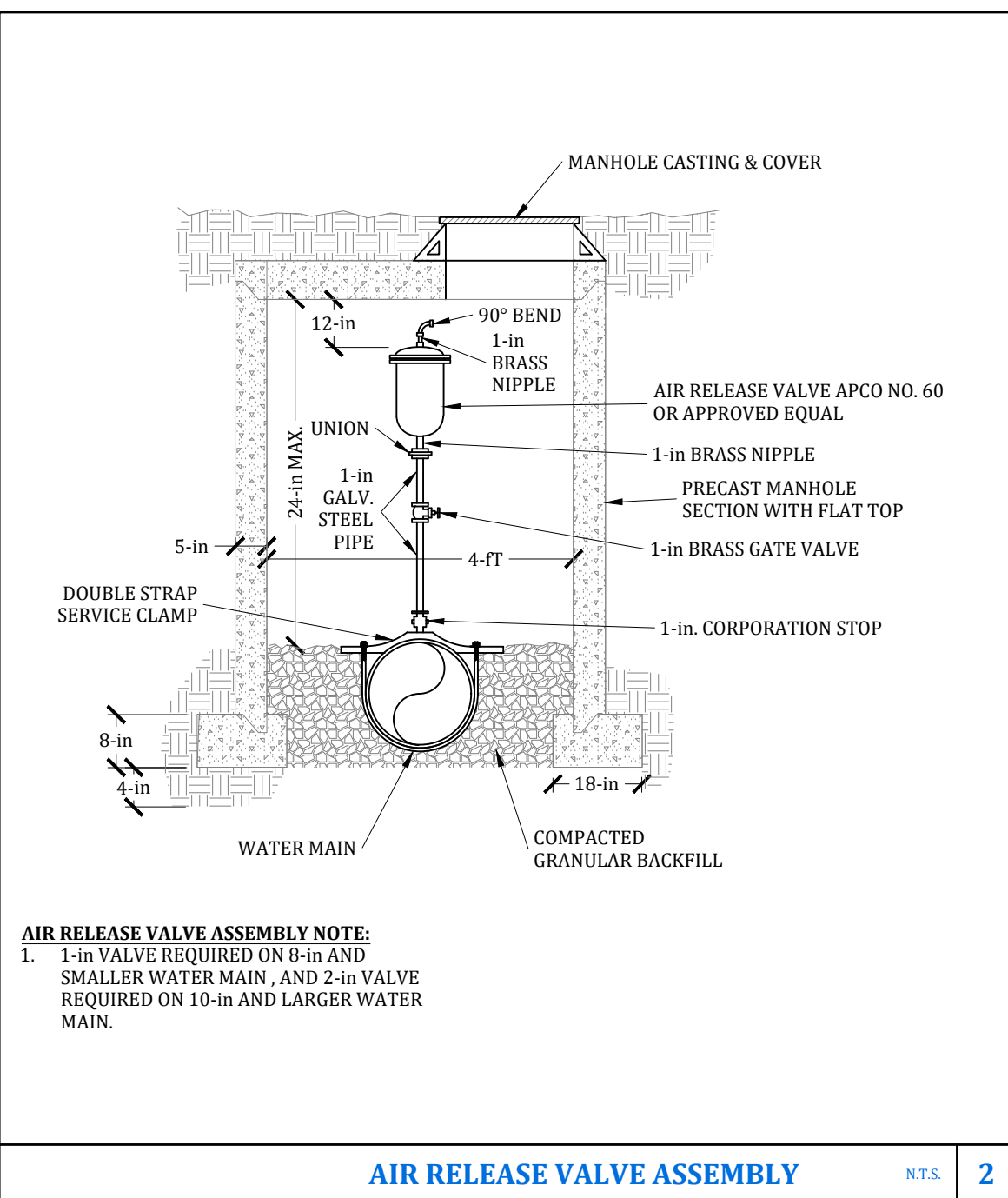
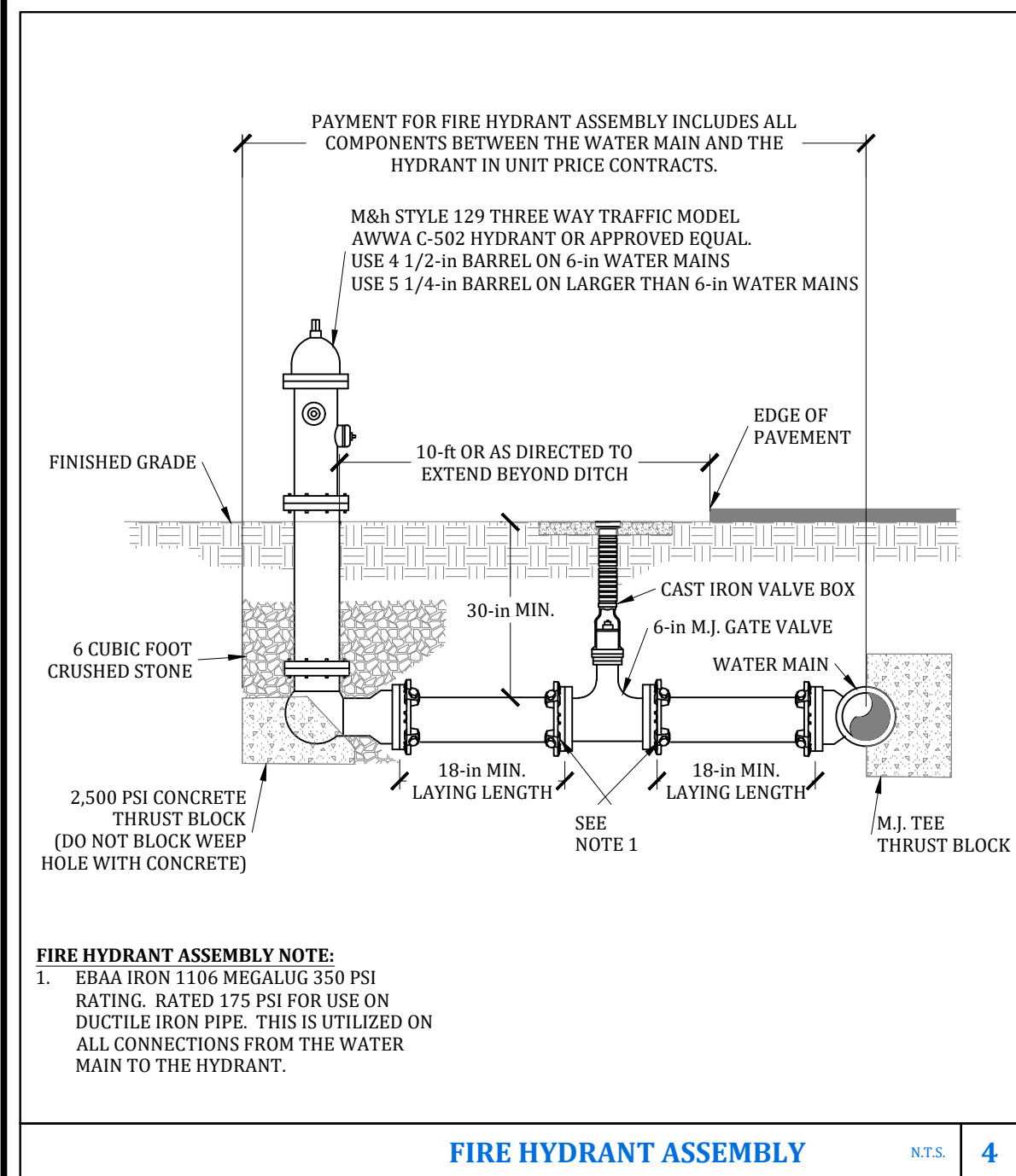
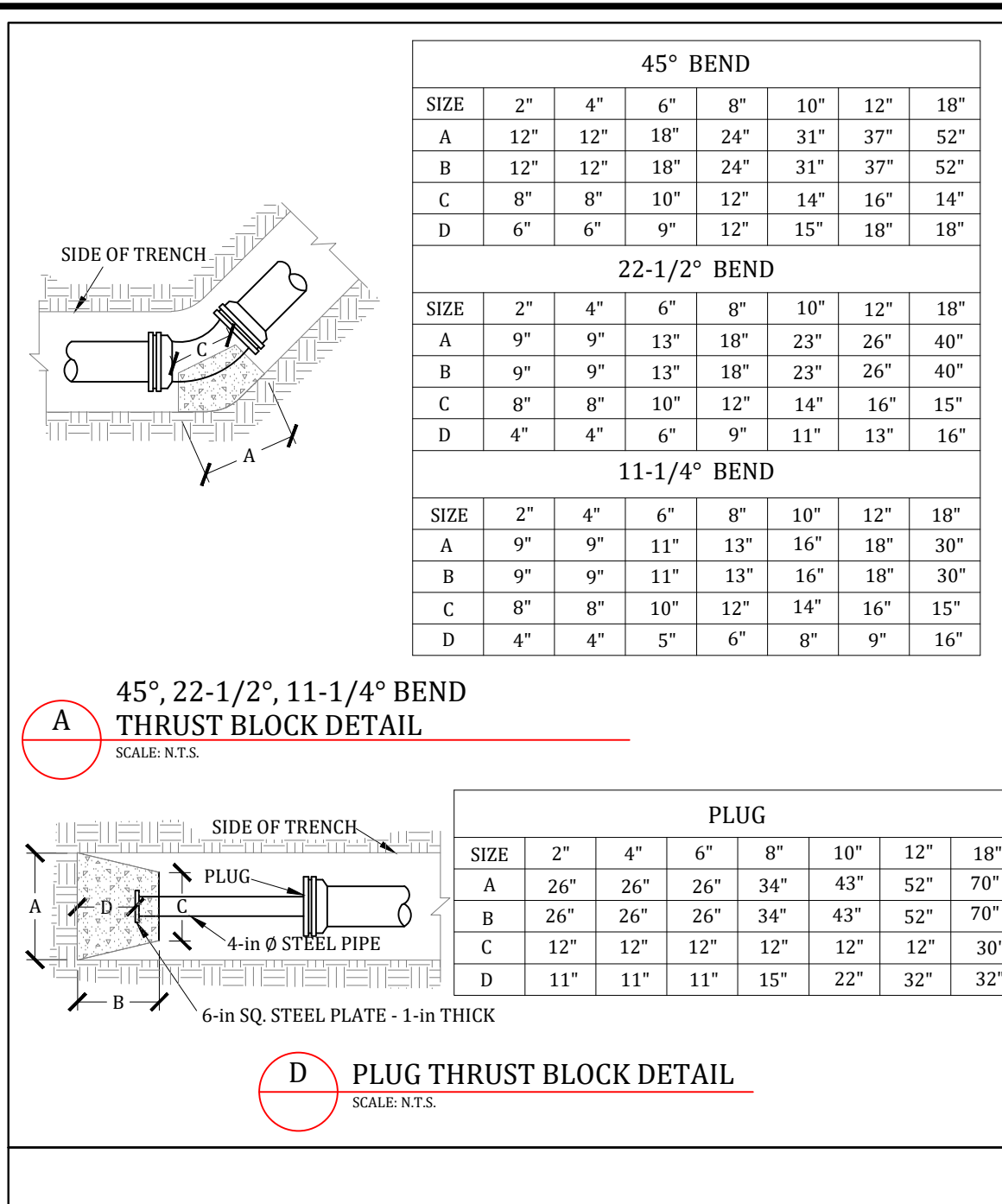
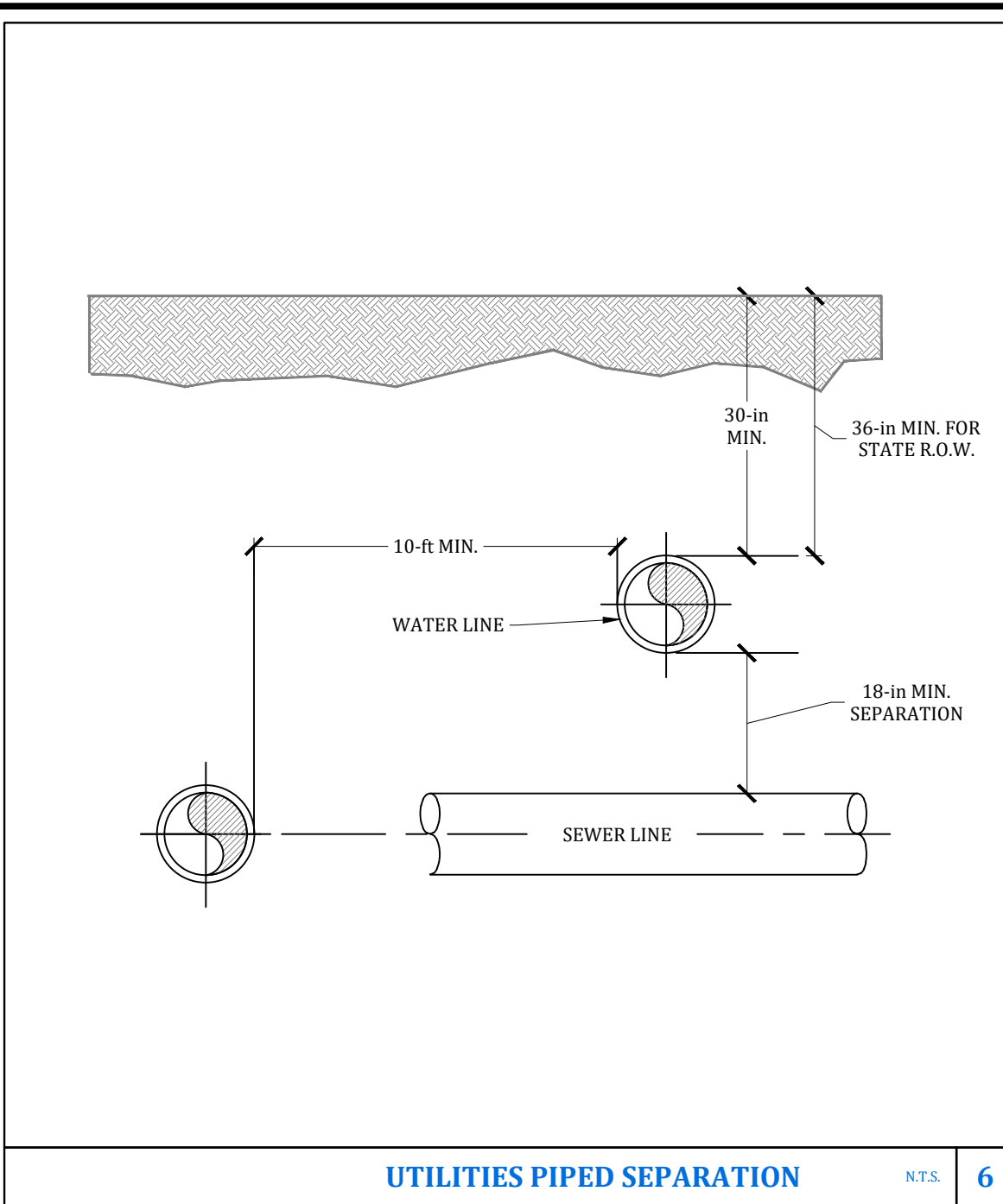
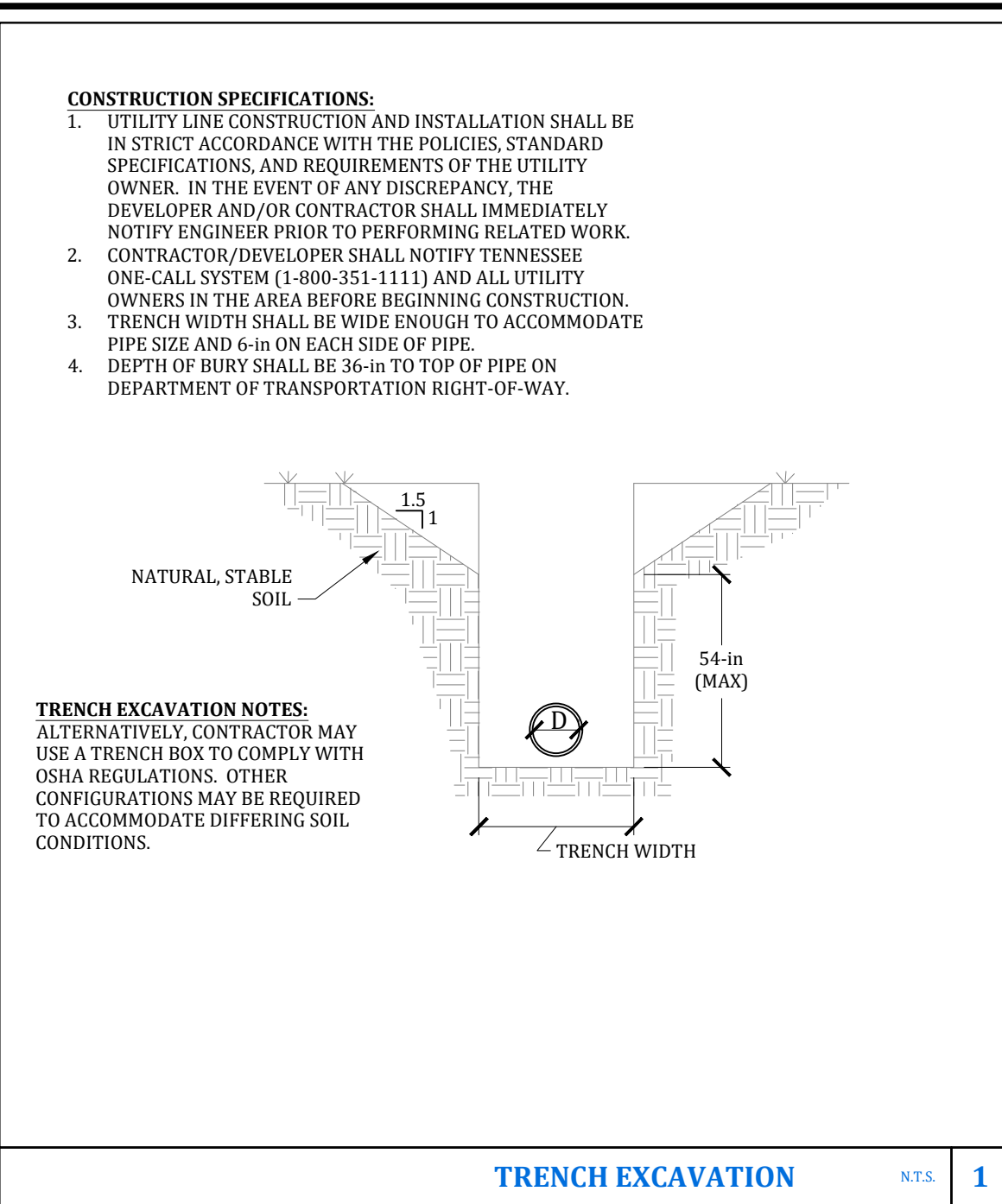
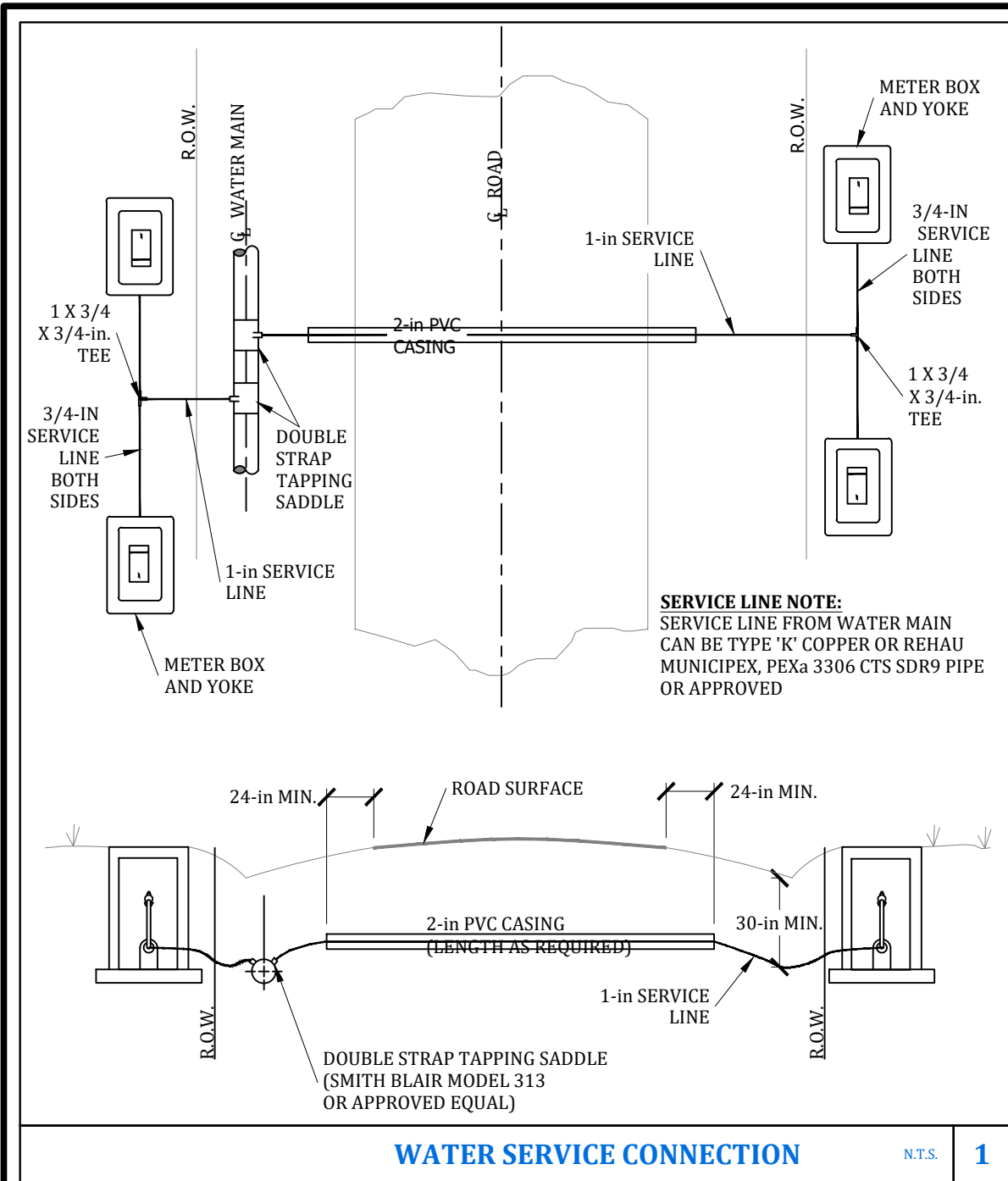




TYPICAL SIGNS	N.T.S.	2
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ASPHALT PAVING SCHEDULE N.T.S. **5**



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REVISIONS

NO.	DATE	DESCRIPTION	CHK	APP
1	5/19/26	ORIGINAL ISSUE	C.F.B.	
2	7/27/26	REVISION FROM PLANNING REVIEW	C.F.B.	

CHECKED BY: J.P.R.
DESIGNED BY: C.F.B.
DRAWN BY: L.S.A.
ORIGINAL DATE: 5/19/26
PROJECT NO.: 26093
DWG NO.: 26093
SCALE: AS NOTED

WATERLINE DETAILS

PRUITT FARMS SUBDIVISION
LEGENDS DEVELOPMENT PARTNERS
7705 SEVIERVILLE PIKE
KNOXVILLE, KNOX COUNTY, TENNESSEE

SHEET REFERENCE NUMBER:
C-502

SHEET 10 OF 11

A1 SHALLOW MANHOLE PLAN
SCALE: NONE

B1 SHALLOW MANHOLE SECTION
SCALE: NONE

GENERAL NOTES:

1. UTILITY LINE CONSTRUCTION AND INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE POLICIES, STANDARD SPECIFICATIONS, AND REQUIREMENTS OF THE UTILITY OWNER OR THE AGENT OF THE UTILITY OWNER. THE DEVELOPER AND/OR CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER PRIOR TO PERFORMING RELATED WORK.
2. CONTRACTOR/DEVELOPER SHALL NOTIFY TENNESSEE ONE-CALL SYSTEM (1-800-351-1111) AND ALL UTILITY OWNERS IN THE AREA BEFORE BEGINNING ANY CONSTRUCTION.
3. TRENCH WIDTH SHALL BE WIDE ENOUGH TO ACCOMMODATE PIPE SIZE and 6in ON EACH SIDE OF PIPE.
4. DEPTH OF BURY SHALL BE 36in TO TOP OF PIPE ON DEPARTMENT OF TRANSPORTATION PROJECTS.
5. UNLESS SPECIFIED ELSEWHERE, NO ROCK GREATER THAN 1 1/2in SHALL BE WITHIN 6in OF ANY PIPE INSTALLATION

ALTERNATIVELY CONTRACTOR
MAY USE A TRENCH BOX TO
COMPLY WITH OSHA REG.

TRENCH EXCAVATION

CLEAN OUT NON-TRAFFIC RATED

A TYPICAL MANHOLE PLAN
SCALE: NONE

B TYPICAL MANHOLE SECTION
SCALE: NONE

STANDARD MANHOLE NOTES:

- | | |
|---|--|
| 1 | MANHOLE LOCATION AND INVERT ELEVATIONS AS SHOWN ON PLANS. |
| 2 | MANHOLE BEDDING SHALL BE 12" MINIMUM OF WELL COMPACTED CLASS I ANGULAR MATERIAL. |
| 3 | INLET AND OUTLET 4" - 6in FIPS. |
| 4 | INLET AND OUTLET PIPE SIZE AND TYPE AS CALLED FOR ON PLANS. |
| 5 | MANHOLES WITHOUT FORMED INVERTS SHALL BE FORMED IN THE FIELD. THE FILL PLACED IN THE BOTTOM OF THE MANHOLE SHALL BE MINERAL AGGREGATE WITH A MINIMUM OF 3in or 4in THICK LAYER OF MINERAL AGGREGATE TO BE PLACED UNDER THE INLET AND OUTLET TO PROVIDE PROTECTION WITH NO PONDING OR RETENTION IN THE MANHOLE. |
| 6 | TYPICAL MANHOLE CASTING SHALL BE NENAH K-1605 OR APPROVED EQUIV. |
| 7 | MANHOLES SHALL BE CAST IN PLACE OR PRECAST IN NENAH K-1605 OR APPROVED EQUIV. |
| 8 | MANHOLES OVER 36" IN HEIGHT SHALL HAVE ALUMINUM STEPS OR FACTORY MOLDED (NO 3 REBAR ENCASED IN POLYPROPYLENE LAMINATE) STEPS SHALL BE A MINIMUM OF 12" WIDE AND POSITIONED 12" FROM THE OUTLET PIPE. |
| 9 | BUTYL MASTIC SEALING OR RUBBER O-RING GASKETS SHALL BE USED AT ALL MANHOLE JOINTS. |

A OUTSIDE PAVED AREA
ON EARTH OR ROCK
SCALE: N.T.S.

**SPECIAL SEWER
TRENCH DETAIL**
SCALE: NONE

MINIMUM DEPTH OF COVER SHALL BE 36in ON STATE RIGHT-OF-WAYS

TRENCH BACKFILL IN NON-TRAFFIC AREA

A STATE HIGHWAY CROSSING
SCALE: N.T.S.

B TYPICAL UNCASSED BORE DETAIL
SCALE: N.T.S.

STEEL CASING PIPE

NOMINAL PIPE SIZE (inch)	INSIDE DIAMETER (inch)
4	8-10
6	10-12
8	14-16
10	16-18
12	18-20
15	22-24

NOTES:

1. DETAILS COVER OPEN CUT AND BORE AN JACK WHERE CALLED FOR ON PLANS
2. CASING IS TO BITUMINOUS COATED INSIDE AND OUT.
3. OPEN CUT CASING SHALL BE BEDDED, PLACED, AND BACKFILLED PRIOR TO PIPE INSTALLATION IN CASING.

C CITY / COUNTY ROADS AND PAVED DRIVEWAY
SCALE: N.T.S.

KNOX COUNTY PLANNING
8-SG-26-C/8-F-26-DP

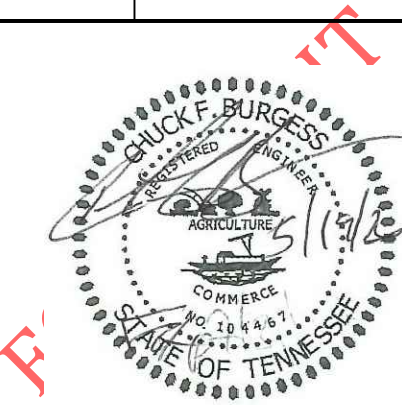
CASING FOR ROAD CROSSING

[illegible]

CHECKED BY:	J.P.B.
DESIGN BY:	C.F.B.
DRAWN BY:	L.D.B.
ORIGINAL DATE:	MARCH 10, 2026
PROJECT NO.:	26693
DWG NO.:	26693
SCALE:	AS NOTED

SANITARY SEWER DETAILS

PRUITT FARMS SUBDIVISION
LEGENDS DEVELOPMENT PARTNERS
7705 SEVIERVILLE PIKE
KNOXVILLE, KNOX COUNTY, TENNESSEE



SHEET REFERENCE
NUMBER:

C-503

SHEET 11 OF 11