

EXISTING BUILDING

INTERSTATE ROUTE 90 (R/W VARIES)

CLEMENS ROAD (60' RW)

CROCKER ROAD (80' RW)



	LEGEND	
	EXISTING	PROPOSED
PROPERTY LINE	---	---
BUILDING LINE	---	---
CURB LINE	---	---
SANITARY MANHOLE	⊙	⊙
CLEANOUT	⊙	⊙
BOLLARD	•	•
INLET	⊙	⊙
TRENCH DRAIN	---	---
FIRE HYDRANT	⊙	⊙
WATER VALVE	⊙	⊙
WATER METER	⊙	⊙
WATER VAULT	⊙	⊙
GAS VALVE	⊙	⊙
GAS METER	⊙	⊙
UTILITY POLE	⊙	⊙
ELECTRIC METER	⊙	⊙
LIMIT OF DISTURBANCE	---	---
REMOVE ITEM		✗
DEMOLISH		---
PAVEMENT DEMO		---

- SITE DEMOLITION GENERAL NOTES**
- EXISTING BOUNDARY INFORMATION IS BASED ON THE ALTA/NSPS LAND TITLE SURVEY PERFORMED BY DEMPSEY SURVEYING COMPANY, DATED MAY 30 2017. EXISTING TOPOGRAPHY IS BASED ON A FIELD SURVEY PERFORMED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES DURING JANUARY AND FEBRUARY OF 2018. THE SURVEYORS OF RECORD ARE RESPONSIBLE FOR THE ACCURACY OF EXISTING CONDITIONS WHICH THE DESIGN AND PERMITTING ACTIVITIES WILL BE BASED UPON.
 - BACKFILLING SHALL BE DONE IN 8-INCH THICK MAXIMUM LOOSE LIFTS. EACH LIFT SHALL BE COMPACTED TO OBTAIN A MINIMUM OF 98% OF THE SOIL'S MAXIMUM DENSITY AS DETERMINED BY ASTM D698, STANDARD PROCTOR METHOD.
 - AFTER EXISTING UTILITY ABANDONMENT AND DEMOLITION, THE AREA OF CONSTRUCTION SHOULD BE BROUGHT TO THE REQUIRED SUBGRADE LEVEL. WHERE EXCAVATION IS REQUIRED, THE AREA SHOULD BE PROOF-ROLLED (AFTER CUTTING TO THE REQUIRED GRADE LEVEL) SHOULD ANY SOFT OR OTHERWISE UNSUITABLE CONDITIONS BE OBSERVED. THE MATERIAL SHOULD BE REMOVED AND REPLACED WITH APPROVED PROPERLY COMPACTED FILL. IN ADDITION THE SUBGRADE SOIL SHOULD BE COMPACTED TO OBTAIN A MINIMUM OF 98% OF THE SOIL'S MAXIMUM DENSITY AS DETERMINED BY ASTM D698 STANDARD PROCTOR METHOD.
 - OFF-SITE FILL MATERIAL SHOULD MEET THE REQUIREMENTS FOR STRUCTURAL FILL.
 - THESE PLANS REPRESENT THE OVERALL SITE WORK IMPROVEMENTS REQUIRED FOR PROJECT CONSTRUCTION. THE CONTRACTOR SHALL FURNISH, INSTALL, TEST AND COMPLETE ALL WORK TO THE SATISFACTION OF THE ENGINEER AND OWNER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION. AS SUCH, THESE PLANS DO NOT COMPLETELY REPRESENT, NOR ARE THEY INTENDED TO REPRESENT, ALL SPECIFIC INSTRUCTIONS REQUIRED FOR SITE WORK CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONSTRUCT ALL IMPROVEMENTS DEPICTED ON THESE PLANS IN ACCORDANCE WITH ALL APPLICABLE RULES, REGULATIONS AND LAWS IN EFFECT AT THE TIME OF CONSTRUCTION.
 - THE CONTRACTOR SHALL ACCEPT THE SITE AS IS. THE CONTRACTOR SHALL ASSESS CONDITIONS, AND THE KIND, QUALITY AND QUANTITY OF WORK REQUIRED. THE OWNER MAKES NO GUARANTEE IN REGARD TO THE ACCURACY OF ANY AVAILABLE INFORMATION WHICH WAS OBTAINED DURING INVESTIGATIONS. THE CONTRACTOR SHALL MAKE A THOROUGH SITE INSPECTION IN KIND TO FIELD CHECK EXISTING SITE CONDITIONS, CORRELATE CONDITIONS WITH THE DRAWINGS AND RESOLVE ANY POSSIBLE CONSTRUCTION CONFLICTS WITH THE OWNER AND ENGINEER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL MAKE ADDITIONAL TOPOGRAPHIC SURVEYS HE DEEMS NECESSARY, PROVIDED THEY ARE COORDINATED WITH THE OWNER. ANY CONDITIONS DETERMINED BY THE CONTRACTOR THAT DIFFER FROM THE INFORMATION SHOWN ON THE DRAWINGS THAT ARE NOT BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER PRIOR TO THE START OF WORK SHALL NOT BE CONSIDERED GROUNDS FOR ADDITIONAL PAYMENT OR CHANGES TO THE CONTRACT DURATION, OR ANY OTHER CLAIMS AGAINST THE OWNER OR OWNER'S ENGINEER.
 - THE CONTRACTOR SHALL, WHEN THEY DEEM NECESSARY, PROVIDE WRITTEN REQUESTS FOR INFORMATION (RFIS) TO THE OWNER AND ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITE WORK ITEM. THE RFI SHALL BE IN A FORM ACCEPTABLE TO OWNER AND ENGINEER AND SHALL ALLOW FOR A MINIMUM OF TWO WORK DAYS OR ADDITIONAL REASONABLE TIME FOR A WRITTEN REPLY. RFIS SHALL BE NUMBERED CONSECUTIVELY BY DATE SUBMITTED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE WORK ITEMS CONSTRUCTED DIFFERENTLY THAN INTENDED OR AS DEPICTED ON THE PLANS.
 - INFORMATION RELATED TO ELEVATIONS AND PROPOSED UTILITIES (SUCH AS ROADWAY GRADES, INVERT ELEVATIONS, RIM ELEVATIONS, GRATE ELEVATIONS, BUILDING FINISHED FLOOR ELEVATIONS, ETC.) MAY BE FOUND IN MORE THAN ONE LOCATION IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL SUFFICIENTLY REVIEW ALL PLANS, PROFILES AND ANY OTHER INFORMATION IN THE CONTRACT DOCUMENTS FOR CONSISTENCY PRIOR TO CONSTRUCTION. ANY INCONSISTENCIES OR DISCREPANCIES THAT ARE FOUND BY THE CONTRACTOR OR HIS ASSIGNS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER IN WRITING, IN THE FORMAT OF AN RFI PRIOR TO CONSTRUCTION.
 - THERE ARE ADDITIONAL NOTES, SPECIFICATIONS AND REQUIREMENTS CONTAINED THROUGHOUT THE PLAN SET AS WELL AS REFERENCES TO SPECIFICATIONS FROM APPLICABLE GOVERNING AUTHORITIES AND INDUSTRY STANDARDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN, REVIEW AND ADHERE TO ALL THESE DOCUMENTS.
 - CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION DEBRIS, TOPSOIL AND SUBGRADE MATERIAL GENERATED BY THIS PROJECT. SUCH MATERIAL SHALL BE PROPERLY DISPOSED OF AT AN ACCEPTABLE OFF-SITE FACILITY.
 - ALL ADJACENT PROPERTIES AND UTILITIES NOT CALLED OUT TO BE REMOVED OR ABANDONED MUST BE PROTECTED DURING DEMOLITION AND CONSTRUCTION IN ACCORDANCE WITH ANY LOCAL OR STATE CODES/REQUIREMENTS.
 - REMOVE EXISTING CURB AS SHOWN. REMOVE EXISTING PAVEMENT AS NECESSARY TO REMOVE AND REPLACE CURB.
 - CONTRACTOR IS RESPONSIBLE FOR ALL GENERATED DEMOLITION DEBRIS AND FILL TO BE EXPORTED FROM THE SITE.
 - ALL EXISTING ADJACENT PAVEMENTS, ROADS, CURBS AND STRIPING ARE TO REMAIN UNLESS OTHERWISE NOTED.
 - ALL UTILITIES AND STRUCTURES ADJACENT TO PROPERTY ARE TO REMAIN UNDISTURBED UNLESS OTHERWISE NOTED.
 - ALL LANDSCAPING, LIGHT POLES, LIGHTING FIXTURES, TREES, SIGNS, CURBS, DEBRIS, FOUNDATIONS, STRUCTURES, AND PAVEMENT WITHIN THE LIMIT OF DISTURBANCE (L.O.D.) ARE TO BE REMOVED IN ITS ENTIRETY UNLESS OTHERWISE NOTED.

PROPOSED CORE AND SHELL BUILDING:

Convergent East

2 Equity Way
Westlake, OH 44145

JOB NUMBER: 180393.00

DRAWING RELEASE:

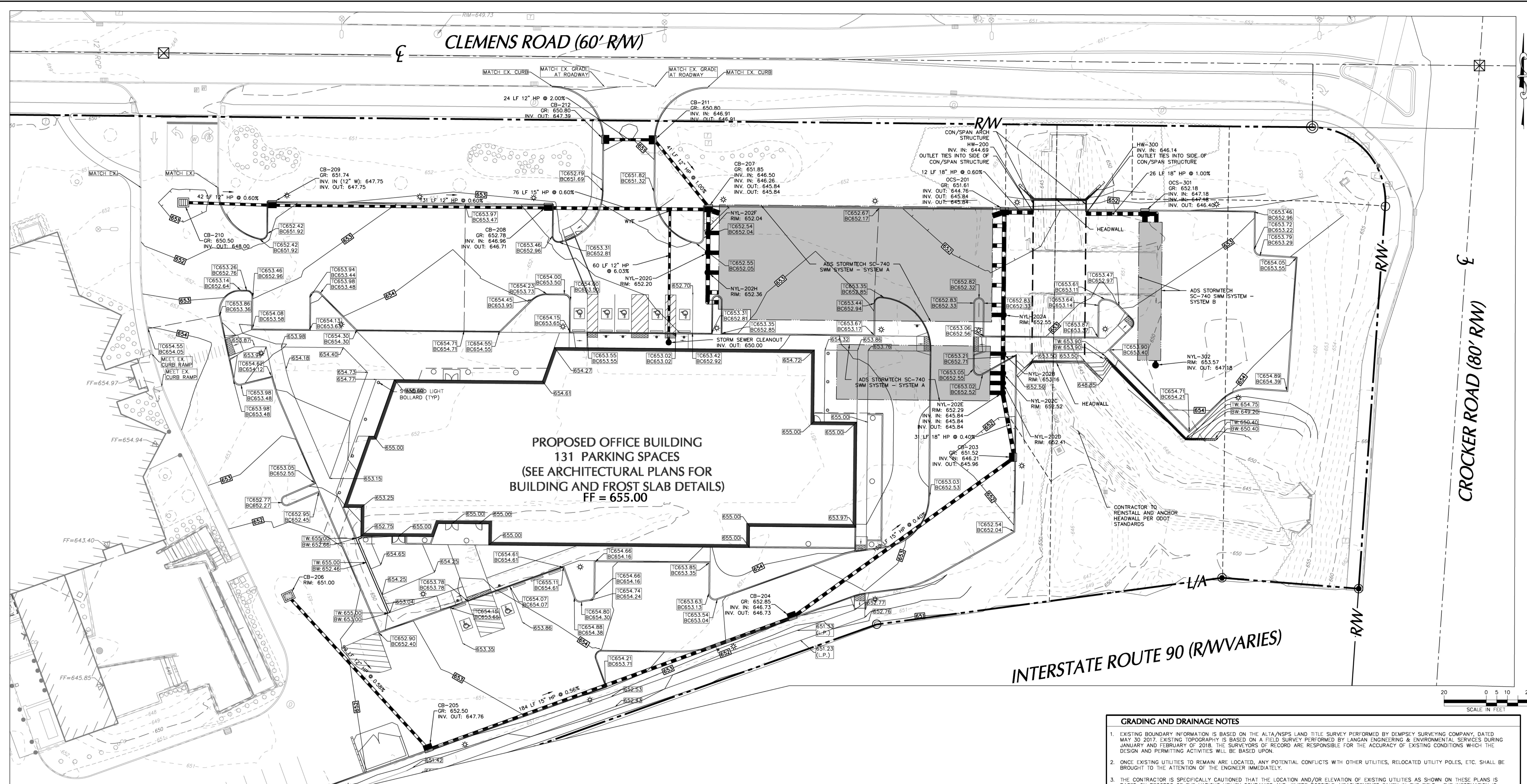
No.	Date	Description
01/04/2019		Permit/Bid Set

SHEET TITLE:

DEMOLITION PLAN

SHEET NUMBER:

CD-101



INTERSTATE ROUTE 90 (RW VARIES)

CROCKER ROAD (80' RW)

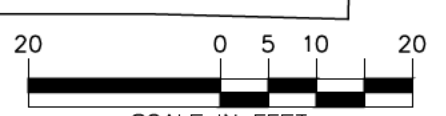
CLEMENS ROAD (60' RW)

PROPOSED OFFICE BUILDING
131 PARKING SPACES
(SEE ARCHITECTURAL PLANS FOR
BUILDING AND FROST SLAB DETAILS)
FF = 655.00

GRADING AND DRAINAGE NOTES

- EXISTING BOUNDARY INFORMATION IS BASED ON THE ALTA/NSPS LAND TITLE SURVEY PERFORMED BY DEMPSEY SURVEYING COMPANY, DATED MAY 30 2017. EXISTING TOPOGRAPHY IS BASED ON A FIELD SURVEY PERFORMED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES DURING JANUARY AND FEBRUARY OF 2018. THE SURVEYORS OF RECORD ARE RESPONSIBLE FOR THE ACCURACY OF EXISTING CONDITIONS WHICH THE DESIGN AND PERMITTING ACTIVITIES WILL BE BASED UPON.
- ONCE EXISTING UTILITIES TO REMAIN ARE LOCATED, ANY POTENTIAL CONFLICTS WITH OTHER UTILITIES, RELOCATED UTILITY POLES, ETC. SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL ALL THE APPROPRIATE UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAYS AT LEAST 72 HOURS BEFORE ANY EXCAVATION OR GRADING TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, UTILITY LOCATIONS, DEPTHS AND INVERTS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN BY THESE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF LANGAN ENGINEERING. CALL OHIO UTILITIES PROTECTION SERVICES - 1-800-362-2764.
- ADJUST ALL EXISTING AND PROPOSED UTILITY FRAMES, GRATES, MANHOLE COVERS, VALVE BOXES, ETC., TO BE FLUSH WITH THE PROPOSED SURFACE ELEVATIONS WITHIN THE LIMITS OF CONSTRUCTION.
- ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS AND ANY LOCAL AUTHORITIES.
- ALL TRENCHES UNDER OR WITHIN 3 FT OF PAVEMENT SHALL BE BACKFILLED WITH ODOT 304.
- ALL STORM PIPE SHALL BE HIGH-PERFORMANCE POLYPROPYLENE STORM PIPE (HPP).
- ALL STORM PIPE SHALL HAVE WATER TIGHT JOINTS.
- ALL DRAINAGE STRUCTURES SHALL BE PRECAST.
- ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (HS20) LOADING AND BE INSTALLED ACCORDINGLY. ALL PROPOSED ROOF LEADERS SHALL BE TIED TO THE STORM SEWER SYSTEM.
- SITE FILL SHALL CONSIST OF MATERIAL FROM APPROVED ONSITE SOURCES OR APPROVED OFFSITE MATERIAL. THE GEOTECHNICAL ENGINEER WILL REVIEW AND APPROVE ALL MATERIALS.
- PARKING LOT AREA SUBGRADES SHALL BE FIRM AND NON-YIELDING. SOFT AREAS AND UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH APPROVED MATERIALS AND AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- THESE PLANS REPRESENT THE OVERALL SITE WORK IMPROVEMENTS REQUIRED FOR SITEWORK CONSTRUCTION. THE CONTRACTOR SHALL FURNISH, INSTALL, TEST AND COMPLETE ALL WORK TO THE SATISFACTION OF THE ENGINEER AND OWNER IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION. AS SUCH, THESE PLANS DO NOT COMPLETELY REPRESENT, NOR ARE THEY INTENDED TO REPRESENT, ALL SPECIFIC INSTRUCTIONS REQUIRED FOR SITE WORK CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONSTRUCT ALL IMPROVEMENTS DEPICTED ON THESE PLANS IN ACCORDANCE WITH ALL APPLICABLE RULES, REGULATIONS AND LAWS IN EFFECT AT THE TIME OF CONSTRUCTION.
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- THERE ARE ADDITIONAL NOTES, SPECIFICATIONS AND REQUIREMENTS CONTAINED THROUGHOUT THE PLAN SET AS WELL AS REFERENCES TO SPECIFICATION FROM APPLICABLE GOVERNING AUTHORITIES AND INDUSTRY STANDARDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN, REVIEW AND ADHERE TO ALL SUCH DOCUMENTS.
- ALL ADA PEDESTRIAN AND PARKING FACILITIES CONSTRUCTED ON SITE MUST BE CONSTRUCTED IN ACCORDANCE WITH FEDERAL AND LOCAL ADA STANDARDS.
- SPOT ELEVATIONS IN PARKING AREAS REPRESENT SURFACE PAVEMENT ELEVATIONS.
- ANY UTILITY CONFLICTS WITH 18 INCHES OR LESS VERTICAL SEPARATION BETWEEN OUTSIDE OF PIPE AND OUTSIDE OF PIPE SHALL BE CONCRETE ENCASED.
- CONTRACTOR TO PROVIDE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AND TOWARD PROPOSED DRAINAGE STRUCTURES.
- OVERSIZED CATCH BASINS MAY BE REQUIRED BASED ON PIPE SIZES AND ANGLES. CONTRACTOR SHALL CONFIRM REQUIRED STRUCTURE SIZES WITH PRECAST MANUFACTURER AND PROVIDE SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO ORDERING.

	LEGEND	
	EXISTING	PROPOSED
PROPERTY LINE	---	---
STORM PIPE	---	---
STORM MANHOLE	○	●
CATCH BASIN / INLET	□	■
CONTOUR	---	---
SPOT ELEVATION	632.64	632.64
TOP OF CURB / BOTTOM OF CURB ELEVATION	633.54	633.54
FRONT OF WALL	---	---
BACK OF WALL	---	---
CURB UNDERDRAIN	---	---



PROPOSED CORE AND SHELL BUILDING:

Convergent East

2 Equity Way
Westlake, OH 44145

JOB NUMBER: 180393.00

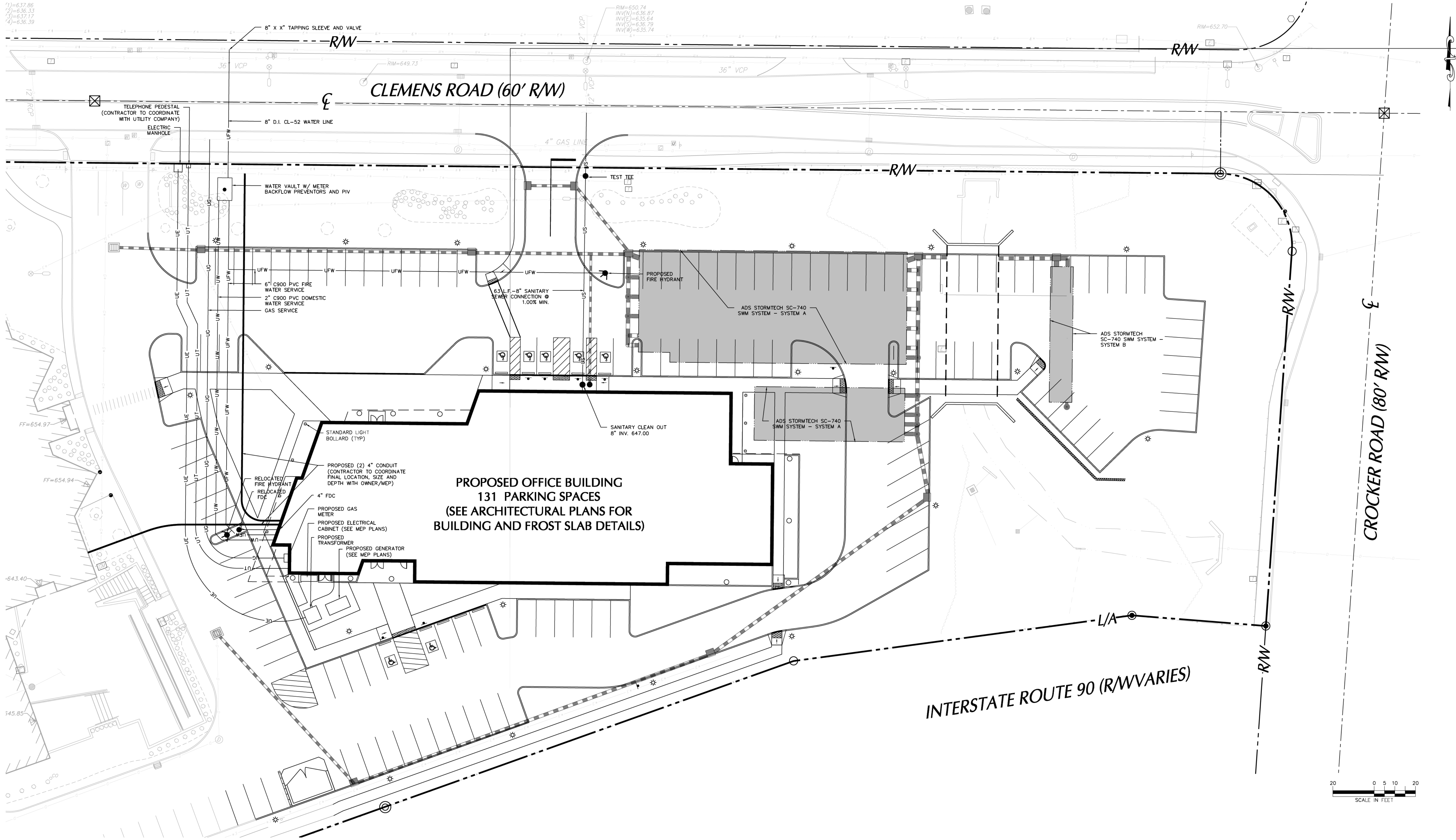
DRAWING RELEASE:

No.	Date	Description
01/04/2019		Permit/Bid Set

GRADING/DRAINAGE & POST CONSTRUCTION PLAN

SHEET NUMBER:

CG101



	LEGEND	
	EXISTING	PROPOSED
WATER LINE	— W —	— UW —
FIRE HYDRANT	⊕	⊕
FDC	⊕	⊕
PIV	⊕	⊕
WATER VALVE	⊕	⊕
GAS LINE	— G —	— UG —
GAS METER	⊕	⊕
GAS VALVE	⊕	⊕
OVERHEAD WIRES	—	—
UTILITY POLE	⊕	⊕
UNDERGROUND ELECTRIC	— E —	— UE —
ELECTRIC METER	⊕	⊕
ELECTRIC STRUCTURE	⊕	⊕
TRANSFORMER	⊕	⊕
LIGHTING FIXTURES	⊕	⊕
UNDERGROUND TELEPHONE	— T —	— UT —
SANITARY SEWER LINE	— S —	— US —
SANITARY MANHOLE	⊕	⊕
SANITARY CLEANOUT	⊕	⊕
STORM PIPE	—	—
CATCH BASIN	⊕	⊕
TRENCH DRAIN	⊕	⊕
STORM MANHOLE	⊕	⊕
YARD DRAIN	⊕	⊕
STORM CLEANOUT	⊕	⊕
4" PVC IRRIGATION SLEEVE	—	—

- UTILITY GENERAL NOTES**
- THE CONTRACTOR IS RESPONSIBLE TO BECOME THOROUGHLY FAMILIAR WITH THE ENGINEERING, DRAINAGE, AND UTILITY STANDARDS OF THE LOCAL MUNICIPALITY AND COUNTY THAT THE PROJECT IS LOCATED IN. ALL LOCAL MUNICIPALITY AND COUNTY STANDARDS WILL TAKE PRECEDENCE OVER THE DETAILS, SPECIFICATIONS, AND NOTES PROVIDED ON THESE DRAWINGS, UNLESS SPECIFICALLY ADDRESSED OTHERWISE BY LANGAN DURING THE PROJECT UPON REQUEST FROM THE CONTRACTOR.
 - THE CONTRACTOR SHALL NOTIFY OHIO UTILITIES PROTECTION SERVICES, AND ANY OTHER UTILITY COMPANIES NOT REPRESENTED BY OHIO UTILITIES PROTECTION SERVICES, 48 HOURS PRIOR TO EXCAVATING INITIATION. NOTIFY OHIO UTILITIES PROTECTION SERVICES AT 1-800-362-2764. CONTRACTOR MUST CONTACT UTILITY COMPANIES FOR EXACT LOCATIONS OF UTILITIES 2 WORKING DAYS BEFORE DIGGING.
 - CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL PROPOSED CONNECTIONS TO EXISTING FACILITIES PRIOR TO COMMENCING WORK. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY LANGAN OF ANY DISCREPANCIES.
 - TRENCH DEPTH REQUIREMENTS MEASURED FROM FINISHED GRADE SHALL MEET THE FOLLOWING:
 - STORM SEWER: DEPTHS, ELEVATIONS, AND GRADES AS INDICATED ON DRAWINGS.
 - SANITARY SEWER: DEPTHS, ELEVATIONS AND GRADES AS INDICATED ON DRAWINGS.
 - WATER MAINS: 72 INCHES TO TOP OF PIPE BARREL OR 6 INCHES BELOW THE FROST LINE OR ESTABLISHED BY THE LOCAL BUILDING OFFICIAL OR WATER COMPANY, WHICHEVER IS DEEPER.
 - GAS MAINS AND SERVICE: 30 INCHES MINIMUM TO TOP OF PIPE, OR AS REQUIRED BY THE LOCAL UTILITY COMPANY, WHICHEVER IS DEEPER.
 - ELECTRIC CONDUITS: 24 INCHES MINIMUM TO TOP OF CONDUIT OR AS REQUIRED BY NEC 300-5 / NEC 710-36 CODES, OR THE LOCAL UTILITY COMPANY REQUIREMENTS, WHICHEVER IS DEEPER.
 - TELEPHONE / TV CONDUITS: 18 INCHES MINIMUM TO TOP OF CONDUIT OR AS REQUIRED BY THE LOCAL UTILITY COMPANY, WHICHEVER IS DEEPER.
 - UTILITY TESTING INCLUDING (BUT NOT LIMITED TO) WATER PRESSURE TESTING, WATER SYSTEM FLUSHING, BACTERIOLOGICAL TESTING, VIDEO CAMERA TESTING, MANDREL TESTING, OR ANY OTHER TESTING REQUIRED BY LOCAL, COUNTY, OR STATE AGENCIES PRIOR TO FINAL ACCEPTANCE OF THE PROJECT AND CERTIFICATE OF OCCUPANCY BEING ISSUED SHALL BE COORDINATED AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE ENGINEER OF RECORD SHALL BE GIVEN 48 HOURS NOTICE PRIOR TO ALL TESTING. THE CONTRACTOR IS SOLELY RESPONSIBLE TO CONTACT AND COORDINATE THE LOCAL AND COUNTY OFFICIALS THAT ARE REQUIRED TO BE PRESENT AT ALL INSPECTIONS. LOCAL FIRE INSPECTORS SHALL BE INVITED TO INSPECT ALL FIRE SERVICE LINES PRIOR TO BACKFILLING OF TRENCHES.
 - THE LOCATIONS (VERTICAL AND HORIZONTAL) OF ALL EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF THE UTILITIES PRIOR TO CONSTRUCTION. ANY UTILITIES (WHETHER THEY ARE SHOWN OR NOT SHOWN ON THE DRAWINGS) DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AT HIS COST.
 - WHERE CONFLICTS ARISE BETWEEN EXISTING OR PROPOSED WATER LINES AND OTHER UTILITIES, STORMWATER CONVEYANCE SYSTEMS OR STRUCTURES, THE WATER LINES SHALL BE ADJUSTED BENEATH OR AROUND THE CONFLICT AS NECESSARY IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.
 - ALL WATERLINES AND APPURTENANCES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS ESTABLISHED BY THE CLEVELAND WATER DEPARTMENT AND THE OHIO EPA.
 - BACKFLOW DEVICE REQUIRED ON ALL SERVICE CONNECTIONS. THE BACKFLOW PREVENTER SHALL BE TESTABLE AND LISTED APPROVED BY THE OHIO EPA AND CLEVELAND WATER DEPARTMENT.
 - ANY EXISTING HYDRANTS, VALVES, VALVE BOXES, METER PITS, SERVICE LINES, CURB BOXES OR WATERMANS THAT ARE DAMAGED OR MUST BE ADJUSTED AND/OR MOVED, MUST BE REPAIRED, ADJUSTED, MOVED AND/OR REPLACED AT THE CONTRACTOR'S EXPENSE.
 - PVC POTABLE WATER MAINS SHALL BE SOLID BLUE IN COLOR. DUCTILE IRON WATER MAINS SHALL BE PAINTED WITH BLUE BANDS. CONTRACTORS SHALL INSTALL ALL NEW OR ALTERED WATER PIPES IN ACCORDANCE WITH APPLICABLE AWWA STANDARDS AND / OR ACCORDANCE WITH MANUFACTURER'S RECOMMENDED PROCEDURES.
 - ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED AND DISINFECTED IN ACCORDANCE WITH AWWA STANDARDS. LATEST REVISIONS. HYDROSTATIC TESTING FOR PVC MAINS SHALL BE 150 PSF FOR MINIMUM OF 2 HOURS AND MEET AWWA STANDARD C-605. DUCTILE IRON MAINS SHALL BE TESTED AT 150 PSF FOR 2 HOURS AND MEET AWWA STANDARD C-600. ALL NEW MAINS SHALL BE DISINFECTED PER AWWA STANDARD C-651. BACTERIOLOGICAL TESTS FOR 2 CONSECUTIVE DAYS SHALL BE APPROVED PRIOR TO PLACING SYSTEM INTO SERVICE. CONTRACTOR SHALL PROVIDE THE OWNER AND ENGINEER OF RECORD WITH AWWA C606 AND NSF-61 CERTIFICATIONS.
 - ALL UTILITIES SHALL HAVE AN "EARLY WARNING" PROTECTION TAPE INSTALLED CONTINUOUSLY ALONG THE ENTIRE LENGTH. THE PROTECTION TAPE SHALL BE INSTALLED DURING THE BACKFILLING 6 TO 12 INCHES BELOW FINISHED GRADE DIRECTLY OVER THE PIPE AND BE CONTINUOUSLY MARKED WITH "CAUTION" (TYPE OF UTILITY) BURIED BELOW. THE TAPE SHALL HAVE AN EMBEDDED METALLIC DETECTABLE STRIP AND FOLLOW AWWA STANDARD Z535.1 SPECIFICATIONS FOR SAFETY COLORS. PROTECTION TAPE SHALL BE TERRA-TAPE OR APPROVED EQUAL.
 - ALL GRAVITY SANITARY SEWER PIPE SHALL BE PVC, ASTM D-3034, SDR35, WITH RUBBER GASKET JOINTS IN ACCORDANCE WITH ASTM D3212.
 - ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
 - PROVIDE CLEANOUTS AT EACH 45° AND 90° BEND. REFER TO DETAIL SHEET FOR TYPICAL CLEANOUT DETAIL.
 - ALL SEWER LINE CONSTRUCTION MUST BE INSPECTED BY THE LOCAL AUTHORITY OR AUTHORIZED REPRESENTATIVE.
 - AT THE POINT WHERE THE PROPOSED SANITARY SEWER CONSTRUCTION MEETS A LIVE OR EXISTING SEWER, THE NEW SANITARY SEWER SHALL BE SECURELY PLUGGED UNTIL THE ENTIRE NEW SANITARY SEWER CONSTRUCTION IS COMPLETED AND READY FOR FINAL INSPECTION.
 - SANITARY SEWER PIPE SHALL BE SUBJECT TO A LEAKAGE AND DEFLECTION TEST. THE LEAKAGE EXFILTRATION/INFILTRATION TEST SHALL BE A HYDROSTATIC OR AIR TEST. THE HYDROSTATIC LEAKAGE TEST SHALL NOT EXCEED 100 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM. THE LOW AIR PRESSURE TESTING SHALL FOLLOW THE PROCEDURE OUTLINED IN ASTM F-1417 FOR PLASTIC PIPE. SANITARY SEWER PIPE SHALL NOT EXCEED A MAXIMUM DEFLECTION OF 5 PERCENT AFTER THE FINAL BACKFILL HAS BEEN IN PLACE NO LESS THAN 30 DAYS TO PERMIT STABILIZATION OF THE SOIL-PIPE SYSTEM. THE RIGID BALL OR MANDREL USED FOR THE DEFLECTION TEST SHALL HAVE A DIAMETER NOT LESS THAN 95 PERCENT OF THE BASE INSIDE DIAMETER OR AVERAGE INSIDE DIAMETER OF THE PIPE DEPENDING ON WHICH IS SPECIFIED IN THE ASTM SPECIFICATION, INCLUDING THE APPENDIX, TO WHICH THE PIPE IS MANUFACTURED. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES. THE LEAKAGE AND DEFLECTION TEST SHALL BE CONDUCTED UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER. ANY LINES WHICH FAIL THE DEFLECTION OR LEAKAGE TEST MUST BE REPAIRED AND RETESTED UNTIL THEY MEET THE REQUIREMENTS WHICH HAVE BEEN SET FORTH.
 - ANY UTILITY CONFLICTS WITH 18 INCHES OR LESS VERTICAL SEPARATION BETWEEN OUTSIDE OF PIPE AND OUTSIDE OF PIPE SHALL BE CONCRETE ENCASED.
 - ONCE EXISTING UTILITIES TO REMAIN ARE LOCATED, ANY POTENTIAL CONFLICTS WITH OTHER UTILITIES, RELOCATED UTILITY POLES, ETC. SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
 - ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS AND ANY LOCAL AUTHORITIES.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCHING, BEDDING AND BACKFILLING ACTIVITIES, INSTALLATION OF ALL CONDUIT, PLACEMENT OF PULL WIRES WITHIN THE SITE AND GROUNDINGS.
 - ALL STORM DRAINAGE PIPES ARE TO BE AS SPECIFIED ON THE PLANS: HIGH-DENSITY POLYETHYLENE PIPE (HDPE), SANDHIT M294 TYPE S FOR PIPE AND FITTINGS. MATERIAL SHALL MEET ASTM D1248 TYPE III, CATEGORY 4, GRADE P33, CLASS C, OR ASTM D3350 CELL CLASSIFICATION 32420C. PIPE SHALL BE SURE-LOK 10.8 PIPE MANUFACTURED BY HANCOCK, INC. WITH WATER-TIGHT JOINTS ACCORDING TO THE REQUIREMENTS OF ASTM D3212, OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321.
 - ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H520) LOADING AND BE INSTALLED ACCORDINGLY.
 - ALL CLEANOUTS SHALL BE FLUSH WITH THE FINAL SURFACE GRADE.
 - COORDINATE STORM, SANITARY, WATER, ELECTRIC, COMMUNICATION AND GAS UTILITIES AND APPURTENANCES WITHIN 5 FEET OF BUILDING WITH ARCHITECTURAL PLANS.
 - CONTRACTOR TO COORDINATE INSTALLATION OF UTILITIES WITH LOCAL UTILITY COMPANIES.
 - SEE ARCHITECTURAL PLANS FOR BUILDING UTILITY REQUIREMENTS.
 - COORDINATE THE SCOPE AND RESPONSIBILITY OF ALL WORK WITH THE LOCAL UTILITY PRIOR TO BIDDING PROJECT. OBTAIN INSTALLATION REQUIREMENTS.
 - CONTRACTOR TO VERIFY EXISTING STORM SEWER AND SANITARY LATERAL ARE IN GOOD CONDITION AND FREE FLOWING.
 - CONTRACTOR TO COORDINATE WITH IRRIGATION CONTRACTOR TO DESIGN IRRIGATION SYSTEM. CONTRACTOR TO PROVIDE 4" IRRIGATION SLEEVES AS SHOWN FOR IRRIGATION CONTRACTORS USE.
 - CONTRACTOR TO INSTALL HANDHOLES & PULLBOXES AS DETERMINED APPROPRIATE BY CONTRACTOR AND UTILITY PROVIDER.

PROPOSED CORE AND SHELL BUILDING:

Convergent East

2 Equity Way
Westlake, OH 44145

JOB NUMBER: 180393.00

DRAWING RELEASE:

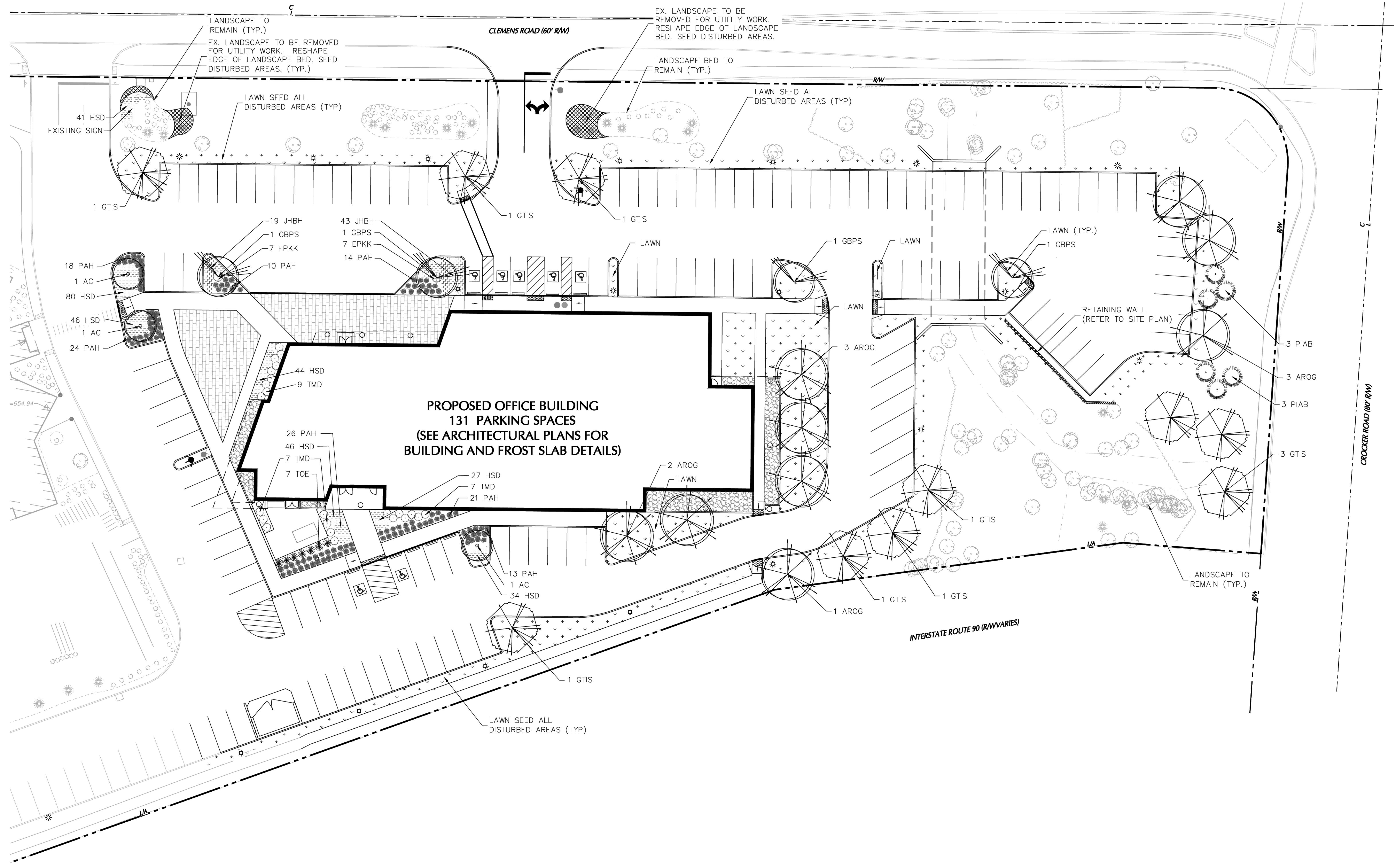
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01/04/2019		Permit/Bid Set

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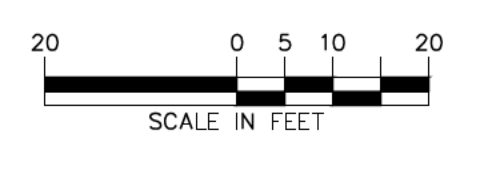
UTILITY PLAN

SHEET NUMBER:

CU101



**PROPOSED OFFICE BUILDING
131 PARKING SPACES
(SEE ARCHITECTURAL PLANS FOR
BUILDING AND FROST SLAB DETAILS)**



KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREE(S)						
ARGO	9	ACIR RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2 1/2-3" CAL.	B+B	-
GBPS	4	GINKGO BILOBA 'PRINCETON SENTINEL'	PRINCETON SENTINEL GINKGO	2 1/2-3" CAL.	B+B	-
GTIS	10	GLADYSTIA 'TRACANTHOS VAR. INERMIS 'SHADMMASTER'	SHADMMASTER HONEYLOCUST	2 1/2-3" CAL.	B+B	-
ORNAMENTAL TREE(S)						
AC	3	AMELANCHER CANADENSIS	SHADBLOW SERVICEBERRY	2" CAL.	B+B	SINGLE STEM
EVERGREEN TREE(S)						
PIAB	15	PICEA ABIES	NORWAY SPRUCE	6-7'	B+B	-
EVERGREEN SHRUB(S)						
JHBH	62	JUNPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR CREEPING JUNIPER	15-18" SPRD.	#3 CAN	spaced @ 30" o.c.
TMD	23	TAXUS X MEDIA 'DENSIFORMIS'	DENSIFORMIS YEW	24-30"	B+B	-
TOE	7	THALIA OCCIDENTALIS 'EMERALD'	EMERALD GREEN ARBORVITAE	5-6'	B+B	-
PERENNIAL(S)						
EPKK	14	EDINACEA PURPUREA 'KIM'S KNEE HIGH'	KIM'S KNEE HIGH PURPLE CONEFLOWER	2 GAL.	CONTAINER	spaced @ 18" o.c.
HSD	323	HEMEROCALLIS 'STELLA D'ORO'	STELLA D'ORO DAYLILY	2 GAL.	CONTAINER	spaced @ 18" o.c.
ORNAMENTAL GRASS(S)						
PAH	124	PENNISETUM ALOPECUROIDES 'AMELON'	DWARF FOUNTAIN GRASS	2 GAL.	CONTAINER	-

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE.

6"-12" WASHED RIVERSTONE @ 18" DEPTH OVER FILTER FABRIC

PROPOSED CORE AND SHELL BUILDING:
Convergent East
2 Equity Way
Westlake, OH 44145

JOB NUMBER: 180393.00
DRAWING RELEASE:
No. Date Description
01/04/2019 Permit/Bid Set

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
LP101

GENERAL LANDSCAPE PLANTING NOTES

- NAMES OF PLANTS AS DESCRIBED ON THIS PLAN CONFORM TO THOSE GIVEN IN "STANDARDIZED PLANT NAMES", 1942 EDITION, PREPARED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE. NAMES OF PLANT VARIETIES NOT INCLUDED THEREIN CONFORM TO NAMES GENERALLY ACCEPTED IN NURSERY TRADE.
- ALL EXPOSED GROUND SURFACES THAT ARE NOT PAVED WITHIN THE CONTRACT LIMIT LINE, AND THAT ARE NOT COVERED BY LANDSCAPE PLANTING OR SEEDING AS SPECIFIED, SHALL BE COVERED BY A NATURAL MULCH THAT WILL PREVENT SOIL EROSION AND THE EMANATION OF DUST.
- NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR PROJECT ENGINEER.
- STANDARDS FOR TYPE, SPREAD, HEIGHT, ROOT BALL AND QUALITY OF NEW PLANT MATERIAL SHALL BE IN ACCORDANCE WITH GUIDELINES AS SET FORTH IN THE "AMERICAN STANDARD FOR NURSERY STOCK", PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. PLANT MATERIAL SHALL HAVE NORMAL HABIT OF GROWTH AND BE HEALTHY, VIGOROUS, AND FREE FROM DISEASES AND INSECT INFESTATION.
- NEW PLANT MATERIAL SHALL BE NURSERY GROWN UNLESS SPECIFIED OTHERWISE. ALL PLANTS SHALL BE SET PLUMB AND SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANTS' ORIGINAL GRADE. BEFORE DIGGING PLANT MATERIAL OF THE SAME SPECIES AND SPECIFIED AS THE SAME SIZE SHOULD BE SIMILAR IN SHAPE, COLOR AND HABIT. THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT PLANT MATERIAL THAT DOES NOT CONFORM TO THE TYPICAL OR SPECIFIED HABIT OF THAT SPECIES.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITY AND SEWER LINES PRIOR TO THE START OF EXCAVATION ACTIVITIES. NOTIFY THE PROJECT ENGINEER AND OWNER IMMEDIATELY OF ANY CONFLICTS WITH PROPOSED PLANTING LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE.
- THE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS. IF THE SPECIFIED LANDSCAPE MATERIAL IS NOT OBTAINABLE, THE CONTRACTOR SHALL SUBMIT PROOF OF NON-AVAILABILITY TO THE LANDSCAPE ARCHITECT AND OWNER, TOGETHER WITH A WRITTEN PROPOSAL FOR USE OF AN EQUIVALENT MATERIAL.
- LANDSCAPE CONTRACTOR TO STAKE OUT PLANTING LOCATIONS, FOR REVIEW AND APPROVAL, BY THE LANDSCAPE ARCHITECT AND/OR OWNER BEFORE PLANTING WORK BEGINS. THE LANDSCAPE ARCHITECT AND/OR OWNER SHALL DIRECT THE CONTRACTOR IN THE FINAL PLACEMENT OF ALL PLANT MATERIAL AND LOCATION OF PLANTING BEDS TO ENSURE COMPLIANCE WITH DESIGN INTENT UNLESS OTHERWISE INSTRUCTED.
- THE LANDSCAPE ARCHITECT MAY REVIEW PLANT MATERIALS AT THE SITE, BEFORE PLANTING, FOR COMPLIANCE WITH REQUIREMENTS FOR GENUS, SPECIES, VARIETY, SIZE, AND QUALITY. THE LANDSCAPE ARCHITECT RETAINS THE RIGHT TO FURTHER REVIEW PLANT MATERIALS FOR SIZE AND CONDITION OF BALLS AND ROOT SYSTEM, INSECTS, INJURIES, AND LATENT DEFECTS, AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. THE CONTRACTOR SHALL REMOVE REJECTED PLANT MATERIALS IMMEDIATELY FROM PROJECT SITE AS DIRECTED BY THE LANDSCAPE ARCHITECT OR OWNER.
- THE PROJECT LANDSCAPE ARCHITECT SHALL CERTIFY THAT THE LANDSCAPE PLAN HAS BEEN INSTALLED PER THE CONTRACT DOCUMENTS ONCE THE PROJECT HAS REACHED SUBSTANTIAL COMPLETION.
- DELIVERY, STORAGE, AND HANDLING
 - PACKAGED MATERIALS: PACKAGED MATERIALS SHALL BE DELIVERED IN CONTAINERS SHOWING WEIGHT, ANALYSIS, AND NAME OF MANUFACTURER. MATERIALS SHALL BE PROTECTED FROM DESTRUCTION DURING DELIVERY, AND WHILE STORED AT SITE.
 - TREES AND SHRUBS: THE CONTRACTOR SHALL PROVIDE TREES AND SHRUBS DUG FOR THE GROWING SEASON FOR WHICH THEY WILL BE PLANTED. DO NOT PRUNE PRIOR TO DELIVERY UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. DO NOT BEND OR BIND TREES OR SHRUBS IN SUCH A MANNER AS TO DAMAGE BARK, BREAK BRANCHES, OR DESTROY NATURAL SHAPE. PROVIDE PROTECTIVE COVERING DURING TRANSPORT. DO NOT DROP BALLED AND BURLAPPED STOCK DURING DELIVERY OR HANDLING.
 - ALL PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOTBALL WRAPPING AND BINDING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED FROM THE TOP OF THE BALL AT THE TIME OF PLANTING. IF THE PLANT IS SHIPPED WITH A WIRE BASKET AROUND THE ROOT BALL, THE WIRE BASKET SHALL BE CUT AND FOLDED DOWN 8 INCHES INTO THE PLANTING HOLE. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE ROOT BALL SHALL BE CUT THROUGH THE SURFACE IN TWO LOCATIONS.
 - THE CONTRACTOR SHALL HAVE TREES AND SHRUBS DELIVERED TO SITE AFTER PREPARATIONS FOR PLANTING HAVE BEEN COMPLETED AND PLANT IMMEDIATELY. IF PLANTING IS DELAYED MORE THAN 6 HOURS AFTER DELIVERY, THE CONTRACTOR SHALL SET TREES AND SHRUBS IN SHADE, PROTECT FROM WEATHER AND MECHANICAL DAMAGE, AND KEEP ROOTS MOIST BY COVERING WITH MULCH, BURLAP OR OTHER ACCEPTABLE MEANS OF RETAINING MOISTURE.
- ALL LANDSCAPED AREAS TO BE CLEARED OF ROCKS, STUMPS, TRASH AND OTHER UNSIGHTLY DEBRIS. ALL FINE GRADED AREAS SHOULD BE HAND RAKED SMOOTH ELIMINATING ANY CLUMPS AND UNLEVEL SURFACES PRIOR TO PLANTING OR MULCHING.
- ALL PLANT MATERIAL SHALL BE INSTALLED AS PER DETAILS, NOTES AND CONTRACT SPECIFICATIONS. THE LANDSCAPE ARCHITECT MAY REVIEW INSTALLATION AND MAINTENANCE PROCEDURES.
- NEW PLANT MATERIAL SHALL BE GUARANTEED TO BE ALIVE AND IN VIGOROUS GROWING CONDITION FOR A PERIOD OF TWO YEARS FOLLOWING ACCEPTANCE BY THE OWNER. PLANT MATERIAL FOUND TO BE UNHEALTHY, DYING OR DEAD DURING THIS PERIOD, SHALL BE REMOVED AND REPLACED IN KIND BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
- THE CONTRACTOR SHALL KEEP AREA CLEAN DURING DELIVERY AND INSTALLATION OF PLANT MATERIALS. REMOVE AND DISPOSE OF OFF-SITE ANY ACCUMULATED DEBRIS OR UNUSED MATERIALS. REPAIR DAMAGE TO ADJACENT AREAS CAUSED BY LANDSCAPE INSTALLATION OPERATIONS.
- ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24-HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR AS REQUIRED BY SITE AND WEATHER CONDITIONS TO MAINTAIN VIGOROUS AND HEALTHY PLANT GROWTH.
- THE BACKFILL MIXTURE AND SOIL MIXES TO BE INSTALLED PER THE SPECIFICATIONS.
- AFTER PLANT IS PLACED IN TREE PIT LOCATION, ALL TWINE HOLDING ROOT BALL TOGETHER SHOULD BE COMPLETELY REMOVED AND THE BURLAP SHOULD BE PULLED DOWN SO 1/3 OF THE ROOT BALL IS EXPOSED. SYNTHETIC BURLAP SHOULD BE COMPLETELY REMOVED AFTER INSTALLATION.
- MULCH SHOULD NOT BE PILED UP AROUND THE TRUNK OF ANY PLANT MATERIAL. NO MULCH OR TOPSOIL SHOULD BE TOUCHING THE BASE OF THE TRUNK ABOVE THE ROOT COLLAR.
- ALL FENCE INSTALLATION SHALL BE COMPLETED PRIOR TO COMMENCEMENT OF ANY LANDSCAPE PLANTING, LAWN AND GRASSES, OR IRRIGATION WORK.
- FOR ANY DISCREPANCIES BETWEEN THE PLANT SCHEDULE AND PLANTING PLAN THE GRAPHIC QUANTITY SHOWN SHALL GOVERN.
- PLANT MATERIALS SHALL NOT BE INSTALLED UNTIL THE FINISHED GRADING HAS BEEN COMPLETED.
- PLANT MATERIALS SHALL NOT BE INSTALLED UNTIL THE FINISHED GRADING HAS BEEN COMPLETED.
- ALL PLANT INSTALLATIONS SHALL BE COMPLETED EITHER BETWEEN APRIL 1 - JUNE 15 OR AUGUST 15 - NOVEMBER 1, UNLESS OTHERWISE DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT. SEE LAWN SEEDING DATES IN SEEDING NOTES.

PLANTING SOIL SPECIFICATIONS

- PLANTING SOIL SHOULD BE FRIABLE, FERTILE, WELL DRAINED, FREE OF DEBRIS, TOXINS, TRASH AND STONES OVER 1/2" DIA., IT SHOULD HAVE A HIGH ORGANIC CONTENT SUITABLE TO SUSTAIN HEALTHY PLANT GROWTH AND SHOULD LOOK AESTHETICALLY PLEASING HAVING NO NOXIOUS ODORS.
- PLANTING SOIL: CONTRACTOR SHALL TEST SOILS AND FURNISH SAMPLES UPON REQUEST. PACKAGED MATERIALS SHALL BE UNOPENED BAGS OR CONTAINERS, EACH BEARING A NAME, GUARANTEE, AND TRADEMARK OF THE PRODUCER, MATERIAL COMPOSITION, MANUFACTURER'S CERTIFIED ANALYSIS, AND THE WEIGHT OF THE MATERIALS. SOIL OR AMENDMENT MATERIALS SHALL BE STORED ON SITE TEMPORARILY IN STOCKPILES PRIOR TO PLACEMENT AND SHALL BE PROTECTED FROM INTRUSION OF CONTAMINANTS AND EROSION. AFTER MIXING, SOIL MATERIALS SHALL BE COVERED WITH A TARP/PAULI UNTIL TIME OF ACTUAL USE.
- THE FOLLOWING TESTING SHOULD BE PERFORMED AND RESULTS GIVEN TO THE LANDSCAPE ARCHITECT FOR APPROVAL BEFORE INSTALLATION:
 - PARTICLE SIZE ANALYSIS - LOAMY SAND, 70-85% SAND, 15-30% SILT AND CLAY
 - FERTILITY ANALYSIS: pH (5.5-6.5), SOLUBLE SALTS (0.25-0.50 MMHOS/CM), NITRATE, PHOSPHATE, POTASSIUM, CALCIUM AND MAGNESIUM
 - ORGANIC MATTER CONTENT: 7-10%
 - TOXIC SUBSTANCE ANALYSIS
 - MATERIAL DRAINAGE RATE: 60% PASSING IN 2 MINUTES, 40% RETAINED
- ORGANIC MATTER AS A SOIL AMENDMENT:
 - LEAF MOLD WITH 60-80% ORGANIC CONTENT BY WEIGHT.
 - SHREDDED LEAF LITTER, COMPOSTED FOR A MINIMUM OF 1 YR. SHOULD BE FREE OF DEBRIS, STONES OVER 1/2", WOOD CHIPS OVER 1".
- SOIL AMENDMENT FOR PLANT MATERIAL: SOIL IN BEDS AND PLANTING ISLANDS OTHER THAN BACKFILL MATERIAL AND TOPSOIL, SHOULD BE FRIABLE, WELL DRAINED, AND FREE OF DEBRIS, INCLUDING STONES AND TRASH. AMENDMENTS FOR BACKFILL IN TREE AND SHRUB PITS:
 - GROUND LIMESTONE (WITH A MIN. OF 88% OF CALCIUM AND MAGNESIUM CARBONATES) USED PENDING RESULTS OF SOIL ANALYSIS. BRING pH LEVELS TO 5.5 MIN. TO 6.5 FOR NON-ERICACEOUS PLANTS. BRING pH LEVELS TO 4.5 MIN. TO 5.5 FOR ERICACEOUS PLANTS
 - TERRA-SORB BY "PLANT HEALTH CARE" 800-421-9051 (SEE MANUFACTURER RECOMMENDATIONS) USED IN PLANTER BACKFILL MIXTURE WITH TREES AND SHRUBS.
 - MYCOR-RSOT SAVER BY "PLANT HEALTH CARE" 800-421-9051 (SEE MANUFACTURER RECOMMENDATIONS) USED IN BACKFILL MIXTURE WITH TREES.

CLEAN SOIL FILL IN LANDSCAPE AREAS. LANDSCAPE FILL MATERIAL SHALL HAVE THE PHYSICAL PROPERTIES OF A SANDY LOAM WITH AN ORGANIC CONTENT OF LESS THAN 2% AND A PH BETWEEN 5 - 7.

SOIL CONDITIONING:
CONTRACTOR TO PROVIDE SIX INCHES (6") MINIMUM DEPTH PLANTING SOIL LAYER IN LAWN AREAS, TWELVE INCHES (12") MINIMUM DEPTH PLANTING SOIL LAYER IN GROUNDCOVER AND PERENNIAL AREAS, EIGHTEEN INCHES (18") MINIMUM DEPTH PLANTING SOIL LAYER IN SHRUB AREAS, AND THIRTY-SIX INCHES (36") MINIMUM DEPTH PLANTING SOIL LAYER IN TREE PLANTING AREAS. PLANTING SOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN SIX INCH (6") LIFTS UNTIL FULL DEPTHS ARE ACHIEVED AS DESCRIBED ABOVE. PLANTING SOIL PRESENT AT THE SITE, IF ANY, MAY BE USED TO SUPPLEMENT TOTAL AMOUNT REQUIRED. CONTRACTOR TO FURNISH AN ANALYSIS OF ON-SITE PLANTING SOIL UTILIZED IN ALL PLANTING AREAS. ADJUST pH AND NUTRIENT LEVELS AS REQUIRED TO ENSURE AN ACCEPTABLE GROWING MEDIUM. LOWER pH USING ELEMENTAL SULFUR ONLY. PEAT MOSS OR COPPER SULFATE MAY NOT BE USED. GROUND LIMESTONE AS A SOIL AMENDMENT MATERIAL WILL ONLY BE USED PENDING RESULTS OF SOIL ANALYSIS. PROVIDE WITH MINIMUM 80% CALCIUM AND MAGNESIUM CARBONATES AND SHALL HAVE TOTAL 100% PASSING THE 10 MESH SIEVE, MINIMUM 90% PASSING 20 MESH SIEVE, AND MINIMUM 60% PASSING 100 MESH SIEVE. ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

SOIL MODIFICATIONS (PENDING RESULTS OF SOIL ANALYSIS):
THOROUGHLY TILL ORGANIC MATTER (LEAF COMPOST) INTO THE TOP 6 TO 12 IN. OF MOST PLANTING SOILS TO IMPROVE THE SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A pH HIGHER THAN 7.0. PEAT MOSS MAY NOT BE USED AS ORGANIC MATTER AMENDMENT.

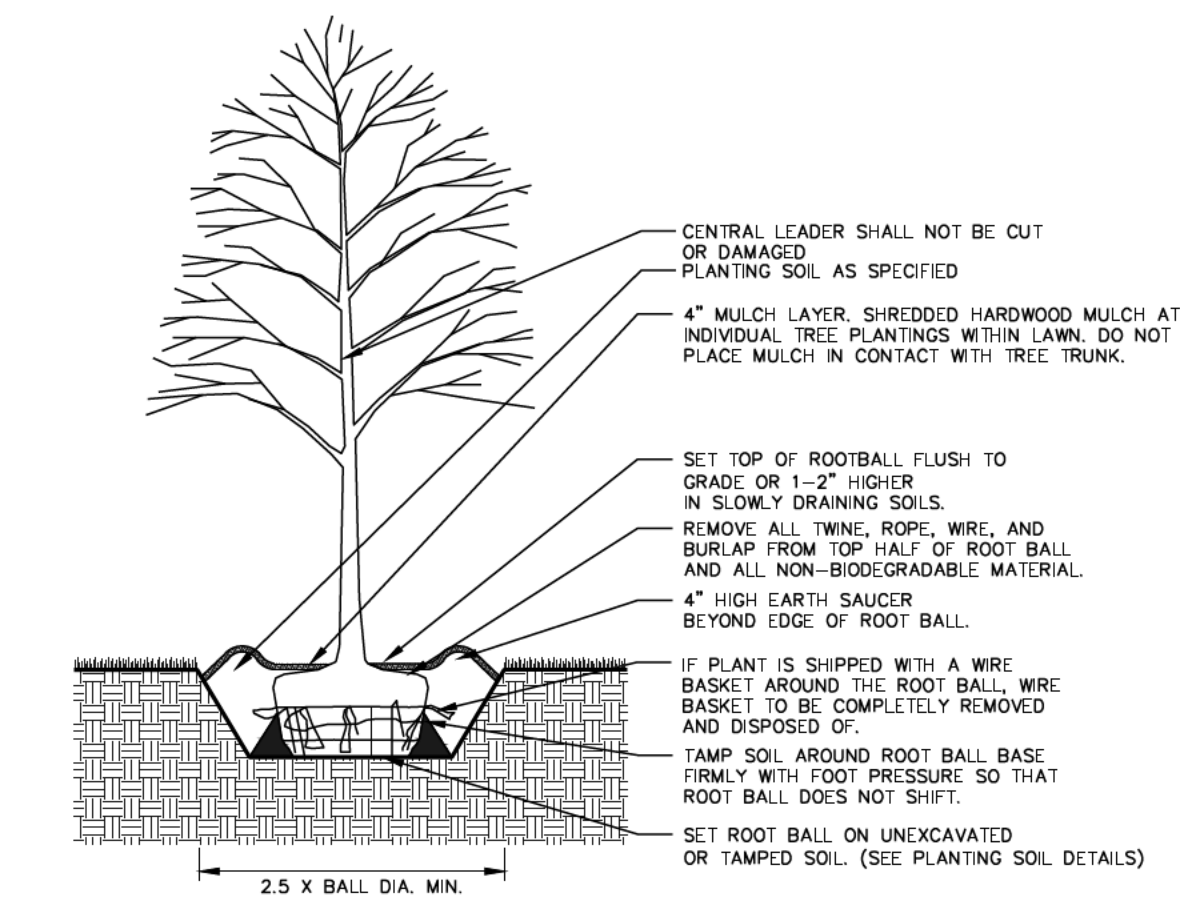
MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. IMPROVE DRAINAGE IN HEAVY SOILS BY PLANTING ON RAISED MOUNDS OR BEDS AND INCLUDING SUBSURFACE DRAINAGE LINES.
MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.

LANDSCAPE MAINTENANCE NOTES

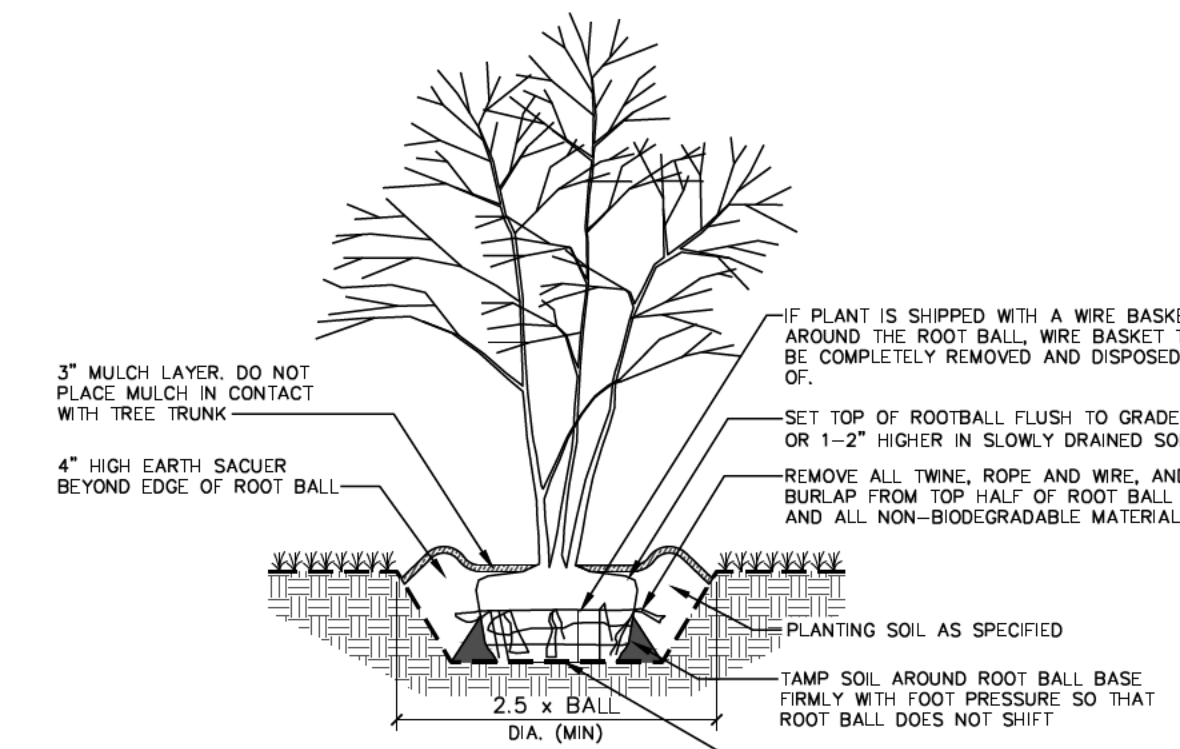
- MAINTENANCE OPERATIONS BEFORE APPROVAL.
 - PLANT CARE SHALL BEGIN IMMEDIATELY AFTER EACH PLANT IS SATISFACTORILY INSTALLED AND SHALL CONTINUE THROUGHOUT THE LIFE OF THE CONTRACT UNTIL FINAL ACCEPTANCE OF THE PROJECT.
 - CARE SHALL INCLUDE, BUT NOT BE LIMITED TO, REPLACING MULCH THAT HAS BEEN DISPLACED BY EROSION OR OTHER MEANS, REPAIRING AND RESHAPING WATER RINGS OR SAUCERS, MAINTAINING STAKES AND GUYS AS ORIGINALLY INSTALLED, WATERING WHEN NEEDED OR DIRECTED, AND PERFORMING ANY OTHER WORK REQUIRED TO KEEP THE PLANTS IN A HEALTHY CONDITION.
 - CONTRACTOR SHALL REMOVE AND REPLACE ALL DEAD, DEFECTIVE AND/OR REJECTED PLANTS AS REQUIRED BEFORE FINAL ACCEPTANCE.
- MAINTENANCE DURING CONSTRUCTION.
 - MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING. PLANTS SHALL BE WATERED, MULCHED, WEDED, PRUNED, SPRAYED, FERTILIZED, CULTIVATED, AND OTHERWISE MAINTAINED AND PROTECTED UNTIL PROVISIONAL ACCEPTANCE. SETTLING PLANTS SHALL BE RESET TO PROPER GRADE AND POSITION. PLANTING SAUCER RESTORED AND DEAD MATERIAL REMOVED. STAKES AND WIRES SHALL BE TIGHTENED AND REPAIRED. DEFECTIVE WORK SHALL BE CORRECTED AS SOON AS POSSIBLE AFTER IT BECOMES APPARENT AND WEATHER AND SEASON PERMIT.
 - IF A SUBSTANTIAL NUMBER OF PLANTS ARE SICKLY OR DEAD AT THE TIME OF INSPECTION, ACCEPTANCE SHALL NOT BE GRANTED AND THE CONTRACTOR'S RESPONSIBILITY FOR MAINTENANCE OF ALL PLANTS SHALL BE EXTENDED FROM THE TIME REPLACEMENTS ARE MADE OR EXISTING PLANTS ARE DEMAILED ACCEPTABLE BY THE LANDSCAPE ARCHITECT.
 - ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE SPECIFIED ON THE PLANT LIST OR THAT WHICH WAS TO BE REMOVED OR RELOCATED. THEY SHALL BE FURNISHED AND PLANTED AS SPECIFIED. THE COST SHALL BE BORNE BY THE CONTRACTOR. REPLACEMENTS RESULTING FROM REMOVAL, LOSS, OR DAMAGE DUE TO OCCUPANCY OF THE PROJECT IN ANY PART, VANDALISM, PHYSICAL DAMAGE BY ANIMALS, VEHICLES, ETC., AND LOSSES DUE TO CURTAILMENT OF WATER BY LOCAL AUTHORITIES SHALL BE APPROVED AND PAID FOR BY THE OWNER.
 - PLANTS SHALL BE GUARANTEED FOR A PERIOD OF TWO YEARS AFTER INSPECTION AND PROVISIONAL ACCEPTANCE.
 - AT THE END OF THE ESTABLISHMENT PERIOD, INSPECTION SHALL BE MADE AGAIN. ANY PLANT REQUIRED UNDER THIS CONTRACT THAT IS DEAD OR UNSATISFACTORY TO THE LANDSCAPE ARCHITECT OR OWNER SHALL BE REMOVED FROM THE SITE AND REPLACED DURING THE NORMAL PLANTING SEASON.

LAWN SEED NOTES

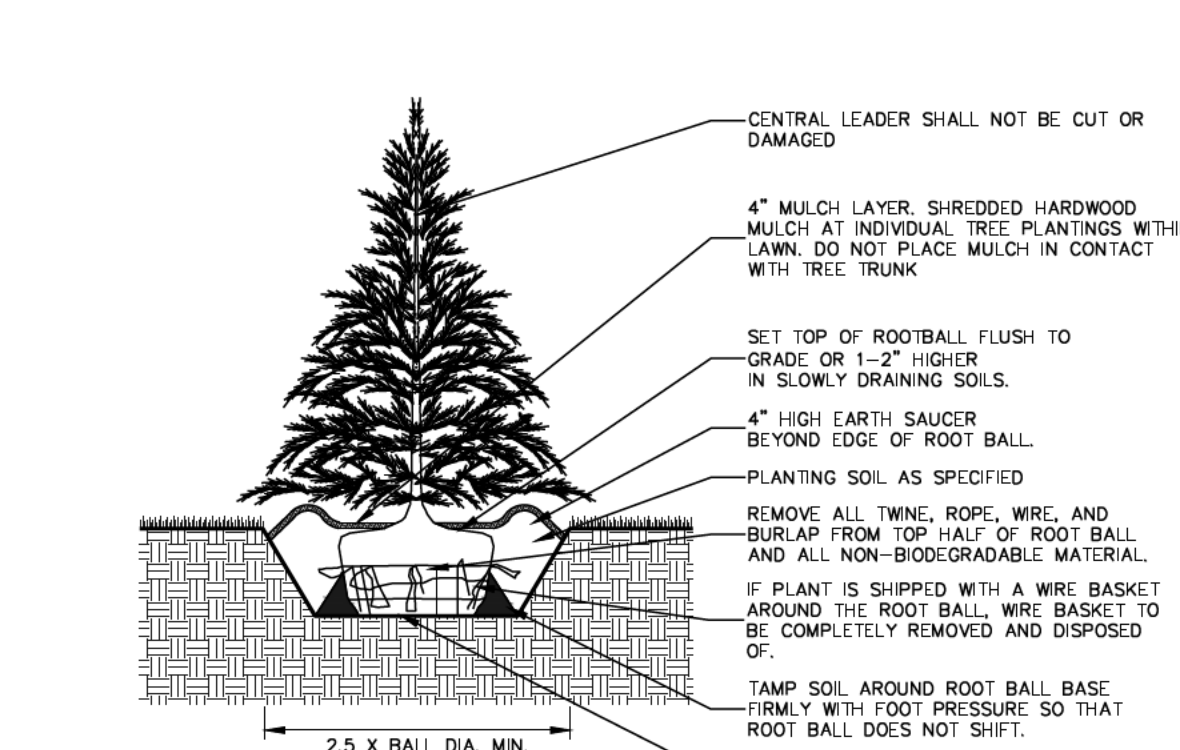
- LAWN SEED MIX
 - PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 1" DIAMETER.
 - THE FOLLOWING SEED MIX SHALL BE SOWN AT THE RATES AS DEPICTED:
RED FESCUE 1 1/2 LBS./1,000 SF
PERENNIAL RYEGRASS 1 LB./1,000 SF
KENTUCKY BLUEGRASS 1 1/2 LBS./1,000 SF
SPREADING FESCUE 1 LB./1,000 SF
 - SEED MIX SHALL BE MULCHED WITH SALT HAY OR UNROTTED SMALL GRAIN STRAW AT A RATE OF 2 TONS/AC OR 90 LBS./1,000 SF
 - SEEDING DATES FOR THIS MIXTURE SHALL BE AS FOLLOWS:
SPRING: APRIL 1 - MAY 31
FALL: AUGUST 16 - OCTOBER 31
 - GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL A STAND OF COVER IS ESTABLISHED AND ACCEPTED BY THE OWNER.
- GENERAL SEEDING NOTES.
 - SEEDING SHALL TAKE PLACE IN THE SPRING (APRIL 1 TO JUNE 1) OR THE FALL (SEPTEMBER 1 TO OCTOBER 1).
 - ELIMINATE UNWANTED VEGETATION PRIOR TO SEEDING USING A GLYPHOSATE-BASED HERBICIDE PER MANUFACTURER'S SPECIFICATIONS. CONTRACTOR TO ENSURE HERBICIDE IS USED AROUND WATER BODIES.
 - IT IS RECOMMENDED THAT CONTRACTOR INSTALL SEED MIXTURE USING A NO-TILL TRUAX-TYPE DRILL WHERE APPLICABLE.
 - THERE MUST BE CONTINUOUS SOIL MOISTURE FOR 4-6 WEEKS TO ALLOW PROPER GERMINATION.
- WEED CONTROL / MAINTENANCE.
 - DURING THE ESTABLISHMENT YEAR, CONTRACTOR SHALL MOW SEEDING IF WEED HEIGHT EXCEEDS MEADOW MIX HEIGHT. MOW AT A HEIGHT OF 8"-10". DO NOT MOW CLOSE, AS SOME OF THE MEADOW MIX MAY BE DAMAGED.
 - AFTER THE FIRST GROWING SEASON, AND IF MEADOW MIX IS WELL ESTABLISHED, THE MEADOW MIX SHALL BE MOWED ONLY ONCE ANNUALLY. ANNUAL MAINTENANCE MOWING SHALL BE DONE IN LATE WINTER DURING THE MONTH OF MARCH.
 - MOW IN DETENTION BASIN DURING DRIER SITE CONDITIONS WHEN SOIL DISTURBANCE WILL NOT OCCUR. MAINTENANCE FOR DETENTION BASIN AND WETLAND TRANSITION AREAS SHALL OCCUR DURING LATE SUMMER (JULY 15 - AUGUST 15) WHEN THE WATER TABLE IS USUALLY AT ITS LOWEST POINT OF THE YEAR. DO NOT MOW IN DETENTION BASIN, WETLAND OR WETLAND TRANSITION AREAS AFTER ESTABLISHMENT OF MEADOW MIX.



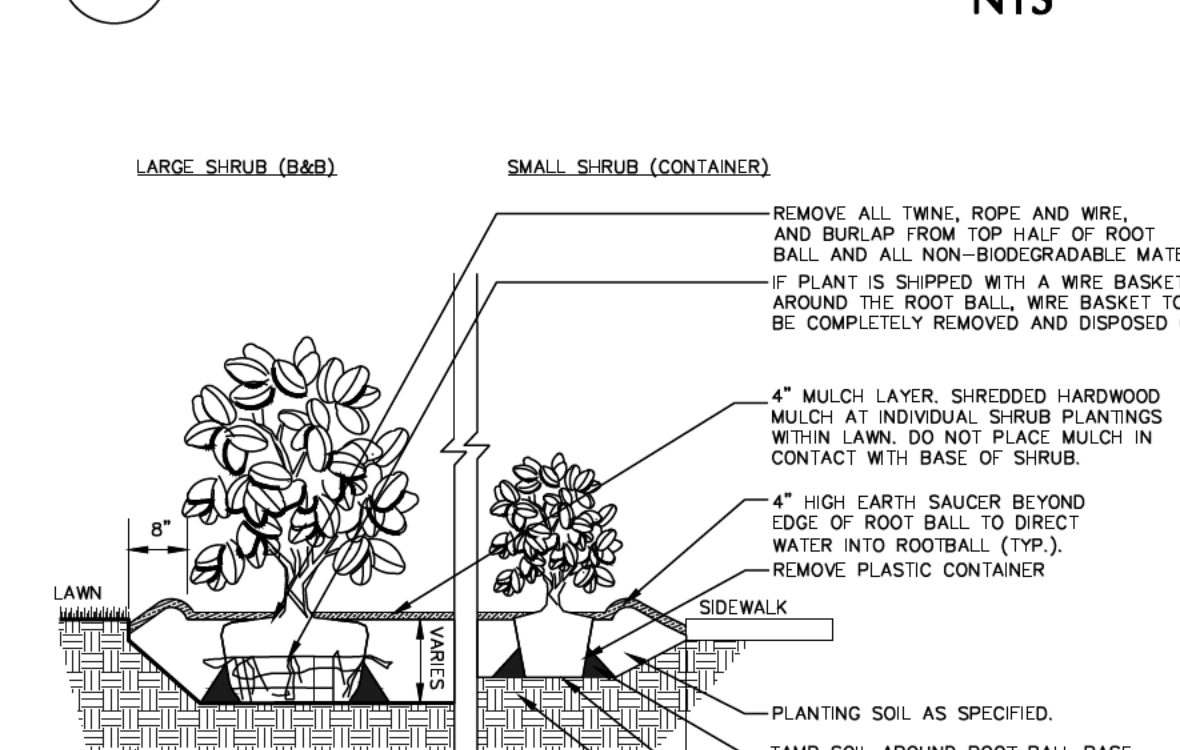
1 DECIDUOUS TREE PLANTING NTS



2 ORNAMENTAL TREE PLANTING NTS

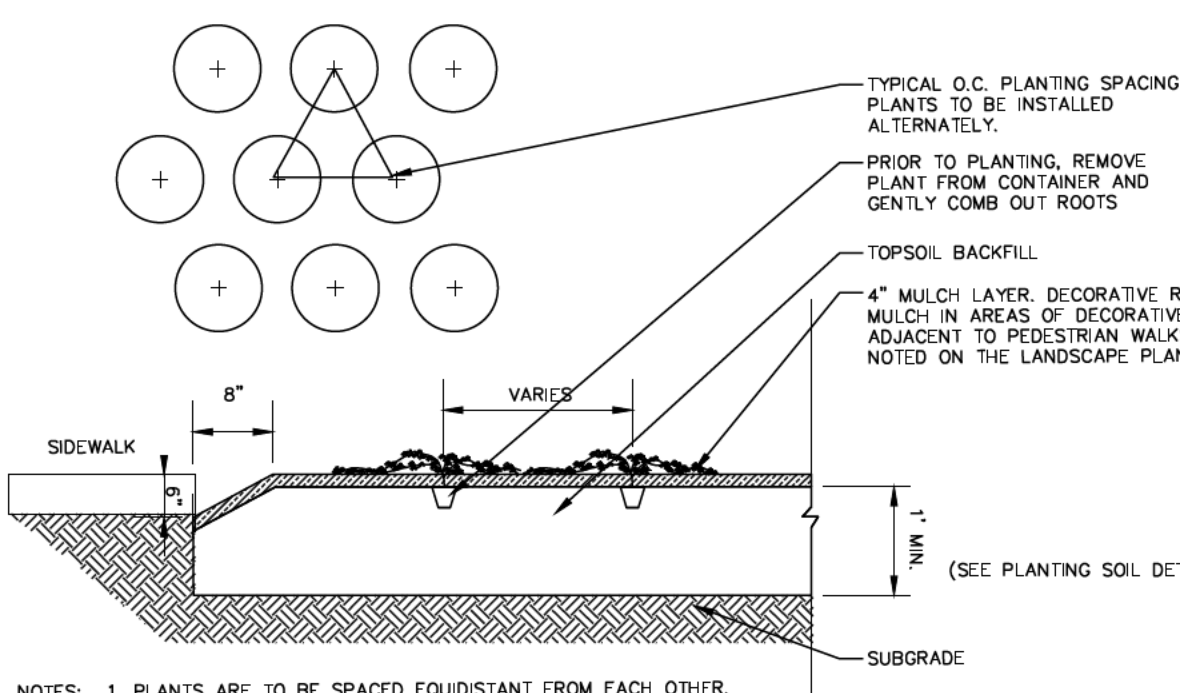


3 EVERGREEN TREE PLANTING NTS



- NOTES: 1. ALL SHRUBS TO BE SET PLUMB.
2. REFER TO LANDSCAPE PLAN FOR SPACING OF INDIVIDUAL PLANTS.
3. REMOVE ALL WIRE, PLASTIC, TAGS OR SYNTHETIC MATERIAL FROM PLANTS PRIOR TO PLANTING.

4 SHRUB PLANTING NTS



- NOTES: 1. PLANTS ARE TO BE SPACED EQUIDISTANT FROM EACH OTHER.
2. REFER TO LANDSCAPE PLAN FOR SPACING OF INDIVIDUAL PLANTS.
3. REMOVE ALL WIRE, PLASTIC, TAGS OR SYNTHETIC MATERIAL FROM PLANTS PRIOR TO PLANTING.

5 GROUNDCOVER/PERENNIAL PLANTING NTS

PROPOSED CORE AND SHELL BUILDING:

Convergent East

2 Equity Way
Westlake, OH 44145

JOB NUMBER: 180393.00

DRAWING RELEASE:

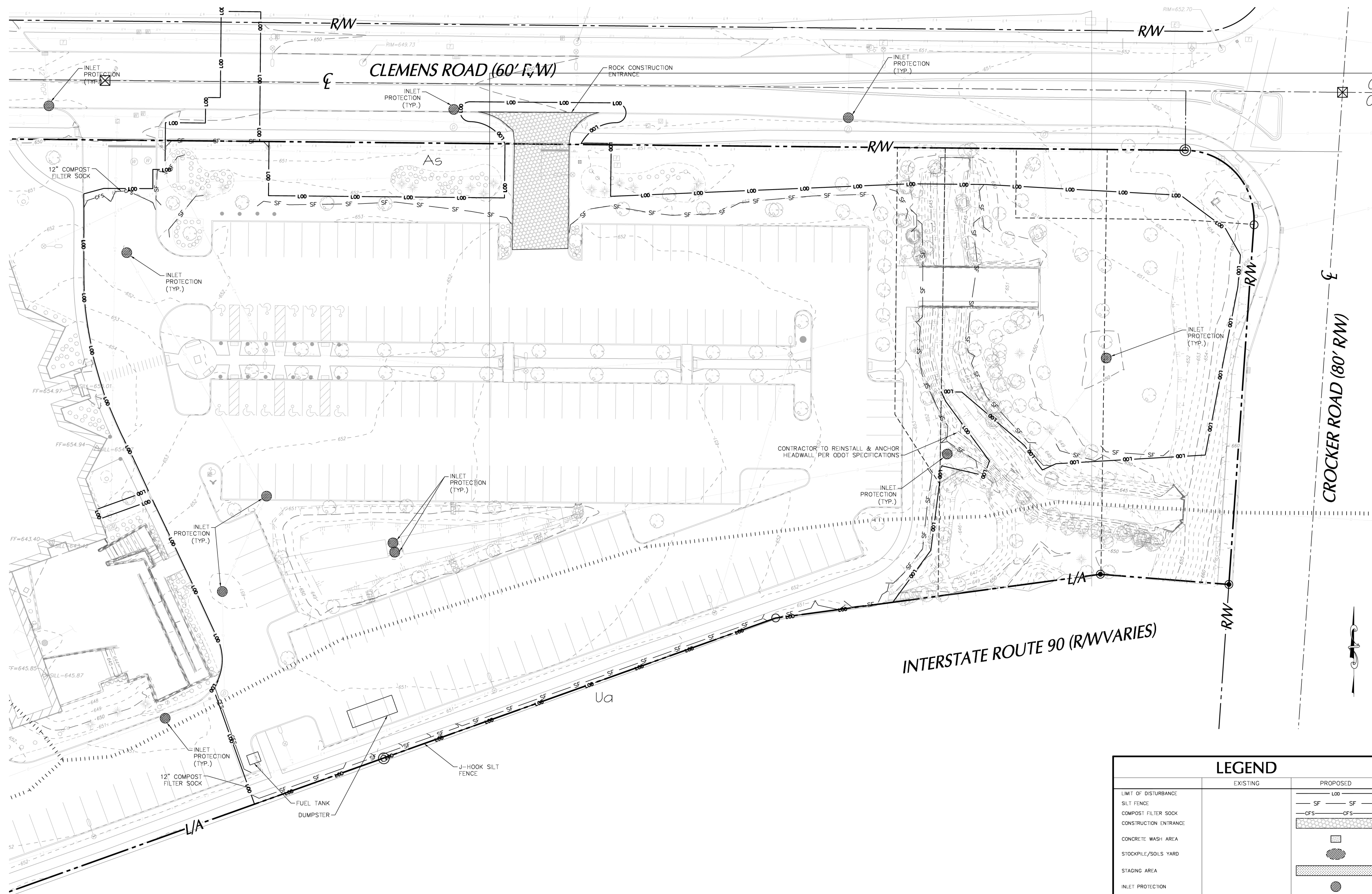
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01/04/2019		Permit/Big Set

SHEET TITLE:

LANDSCAPE
DETAILS

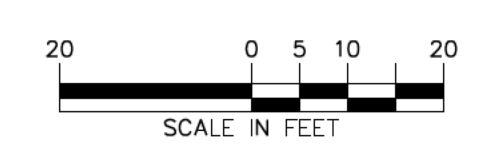
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INTERSTATE ROUTE 90 (R/W VARIES)

LEGEND		
	EXISTING	PROPOSED
LIMIT OF DISTURBANCE		LOD
SILT FENCE		SF
COMPOST FILTER SOCK		CFS
CONSTRUCTION ENTRANCE		Rock Construction Entrance
CONCRETE WASH AREA		Concrete Wash Area
STOCKPILE/SOILS YARD		Stockpile/Soils Yard
STAGING AREA		Staging Area
INLET PROTECTION		Inlet Protection
SOIL TYPE		UoB
SOIL TYPE BOUNDARY		Soil Type Boundary
ROCK CHECK DAM		Rock Check Dam
CONTOUR	6.32	6.34

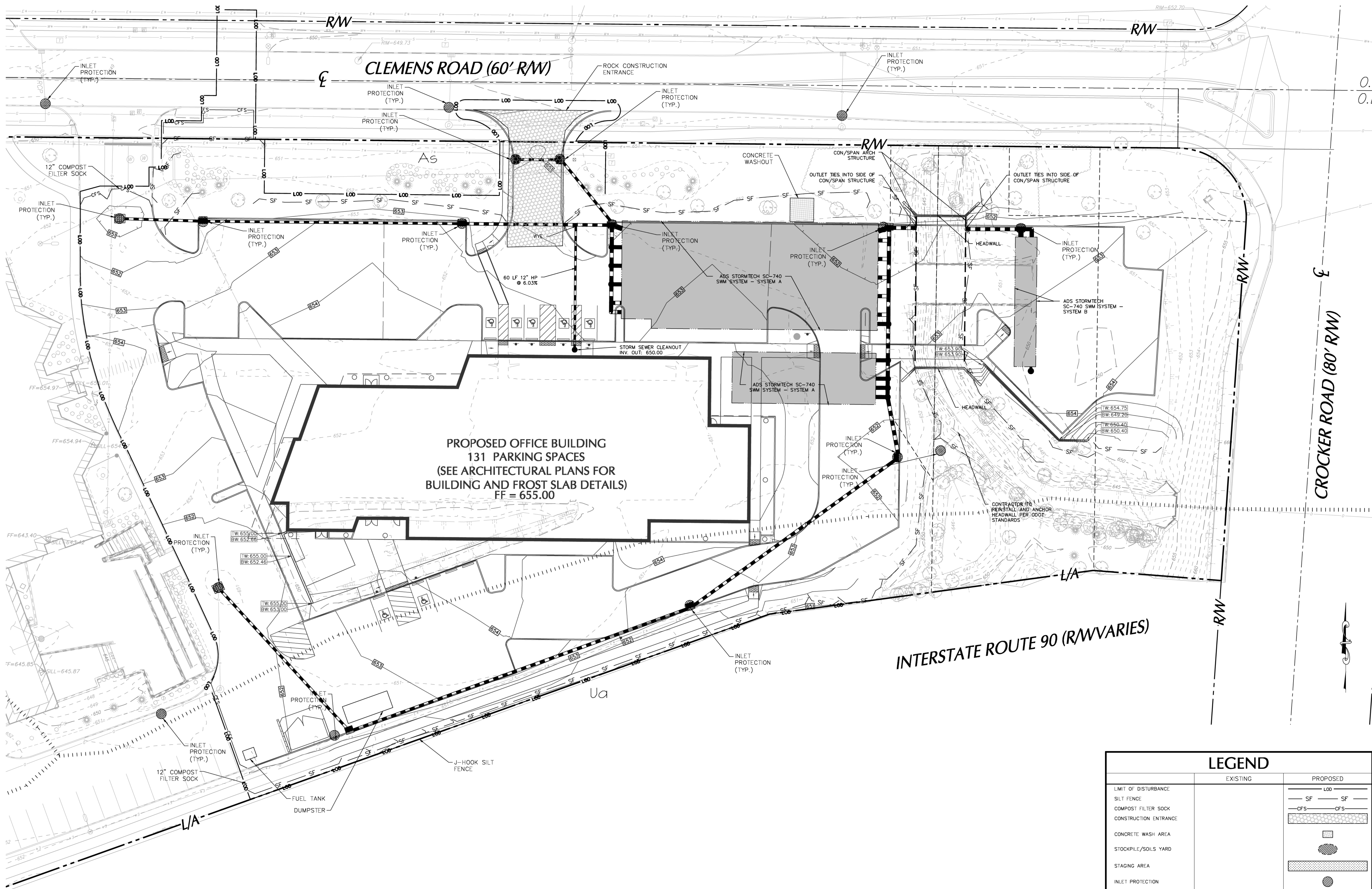


PROPOSED CORE AND SHELL BUILDING:
Convergent East
2 Equity Way
Westlake, OH 44145

JOB NUMBER: 180393.00
DRAWING RELEASE:
No. Date Description
01/04/2019 Permit/Bid Set

SHEET TITLE:
TEMPORARY SOIL EROSION AND SEDIMENT CONTROL PLAN - PHASE 1

SHEET NUMBER:
CE101

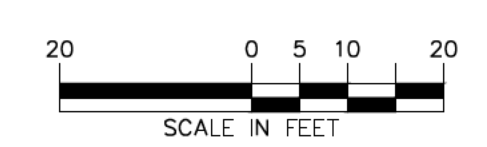


PROPOSED OFFICE BUILDING
 131 PARKING SPACES
 (SEE ARCHITECTURAL PLANS FOR
 BUILDING AND FROST SLAB DETAILS)
 FF = 655.00

INTERSTATE ROUTE 90 (R/W VARIES)

LEGEND

	EXISTING	PROPOSED
LIMIT OF DISTURBANCE		LOD
SILT FENCE		SF
COMPOST FILTER SOCK		CFS
CONSTRUCTION ENTRANCE		CE
CONCRETE WASH AREA		CWA
STOCKPILE/SOILS YARD		SY
STAGING AREA		SA
INLET PROTECTION		IP
SOIL TYPE		UoB
SOIL TYPE BOUNDARY		STB
ROCK CHECK DAM		CCD
CONTOUR	6.32	6.34



PROPOSED CORE AND SHELL BUILDING:

Convergent East

2 Equity Way
 Westlake, OH 44145

JOB NUMBER: 180393.00

DRAWING RELEASE:

No.	Date	Description
01/04/2019		Permit/Bid Set

SHEET TITLE:
**TEMPORARY SOIL
 EROSION AND
 SEDIMENT CONTROL
 PLAN - PHASE II**

SHEET NUMBER:

CE102

PROJECT NAME AND LOCATION:
CONVERGENT EAST
2 EQUITY WAY
WESTLAKE, OHIO 44145

OWNER NAME AND ADDRESS:
[REDACTED]

SITE DESCRIPTION:
THIS PROJECT WILL CONSIST OF CONSTRUCTING AN OFFICE BUILDING, PARKING LOT AND ON-SITE UTILITIES. SOIL DISTURBING ACTIVITIES WILL INCLUDE: INSTALLING A STABILIZED CONSTRUCTION ENTRANCE, PERIMETER, AND OTHER EROSION AND SEDIMENT CONTROLS; DEMOLITION, GRADING, STORM SEWER, AND UTILITIES; AND PREPARATION FOR FINAL PLANTING AND SEEDING.

SITE AREA:
THE SITE IS APPROXIMATELY 2.87 ACRES OF DISTURBANCE BY CONSTRUCTION ACTIVITIES.

SOIL TYPES:
A: As - Alls, all, loam 84% OF SITE
B: Uic - Uic, fine, loamy 16% OF SITE

THE CONTRACTOR SHALL USE EROSION CONTROL MEASURES AS NECESSARY TO PREVENT SEDIMENT MOVEMENT INTO AREAS DESIGNATED AS WETLANDS, STREAMS, OR WATER BODIES.

NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF.

THE CONTRACTOR SHALL USE THE INDICATED AREA DESIGNATED FOR THE STORAGE OR DISPOSAL OF SOLID, SANITARY, AND TOXIC WASTES, INCLUDING DUMPSTER, CEMENT TRUCK WASH-OUT, AND VEHICLE REFUELING AREAS.

CAST IRON CATCH BASINS, GRATES, AND INLET COVERS WITH MESSAGES SUCH AS "DUMP NO WASTE, DRAINS TO WATERWAYS" SHALL BE UTILIZED AS A NON-STRUCTURAL BEST MANAGEMENT PRACTICE THAT PROMOTES POLLUTION PREVENTION AND CONSERVATION AWARENESS. ALL CATCH BASIN GRATES AND INLET COVERS SHALL BE SPECIFIED WITH AN EQUIVALENT MESSAGE.

PRIOR LAND USE:
THE SITE WAS PREVIOUSLY DEVELOPED AS A PARKING LOT.

SEQUENCE OF MAJOR ACTIVITIES:
ALL NECESSARY EROSION, SEDIMENT, NON-SEDIMENT POLLUTANT CONTROLS, STORM WATER MANAGEMENT PRACTICES OR FACILITIES, AND POST-CONSTRUCTION BEST MANAGEMENT PRACTICES ARE TO BE EMPLOYED DURING EACH OPERATION OF THE SEQUENCE.

THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND PERIMETER CONTROLS (SILT FENCE, COMPOST FILTER SOCK, INLET PROTECTION).
2. CLEAR AND GRUB TREES, BRUSH AND STUMPS AS NECESSARY TO ACCOMPLISH CONSTRUCTION.
3. STRIP AND STOCKPILE TOPSOIL.
4. STABILIZE DENUDED AREAS AND STOCKPILES WITHIN 7 DAYS OF LAST CONSTRUCTION ACTIVITY IN THAT AREA.
5. COMMENCE EARTHWORK ACTIVITIES.
6. INSTALL STORMWATER MANAGEMENT SYSTEMS PER PLANS.
7. APPLY UTILITIES, STORM SEWER, ETC.
8. APPLY STONE BASE TO ROADWAYS.
9. COMPLETE GRADING AND INSTALL PERMANENT SEEDING.
10. ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED UPON PERMANENT STABILIZATION.
11. RE-SEED ANY DISTURBED AREAS.

NAME OF RECEIVING WATERS:
THE SITE WILL DRAIN TO AN ON-SITE STORM SYSTEM WHICH DISCHARGES TO A TRIBUTARY OF PORTER CREEK.

SITE DESCRIPTION

GENERAL NOTES

NOTICE OF INTENT (NOI) MUST BE SUBMITTED TO THE OHIO EPA FOR NPDES PERMIT 21 DAYS PRIOR TO THE START OF CLEARING AND GRADING.

ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH ALL LOCAL EROSION AND SEDIMENT CONTROL REGULATIONS.

ALL EROSION AND SEDIMENT CONTROL PRACTICES MUST MEET THE STANDARDS AND SPECIFICATIONS OF THE CURRENT EDITION OF THE OHIO RAINWATER AND LAND DEVELOPMENT MANUAL.

PERIMETER CONTROLS SHALL BE IMPLEMENTED AS A FIRST STEP AND SHALL CONTINUE TO FUNCTION UNTIL UPLAND AREAS ARE STABILIZED.

OTHER EROSION CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS.

REGULAR INSPECTION AND MAINTENANCE WILL BE PROVIDED FOR ALL EROSION AND SEDIMENT CONTROL PRACTICES. INSPECTIONS ARE TO BE PERFORMED UNTIL THE NOTICE OF TERMINATION (NOT) IS FILED. PERMANENT RECORDS OF MAINTENANCE AND INSPECTIONS MUST BE KEPT THROUGHOUT THE CONSTRUCTION PERIOD AND FOR 3 YEARS AFTER THE (NOT) IS FILED WITH THE OHIO EPA. INSPECTIONS MUST BE MADE A MINIMUM OF ONCE EVERY 7 DAYS AND IMMEDIATELY AFTER STORM EVENTS GREATER THAN 0.5 INCHES OF RAIN IN A 24 HOUR PERIOD. PROVIDE NAME OF INSPECTOR, MAJOR OBSERVATIONS, DATE OF INSPECTION, AND CORRECTIVE MEASURES TAKEN.

AN OFF-SITE BORROW OR SPILL AREAS SHALL BE COVERED BY A SEPARATE (NO) THESE PLANS SHALL NOT BE USED FOR ANY OFF-SITE ACTIVITIES.

GENERAL NOTES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, STABILIZED CONSTRUCTION ENTRANCES, SILT FENCE, AND SEDIMENTS BASINS WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 14 DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN 7 DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED WITH PERMANENT SEED AND MULCH. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE BASIN.

DISTURBED AREAS THAT ARE TO REMAIN DORMANT FOR OVER 1 YEAR OR AT FINAL GRADE SHALL HAVE PERMANENT EROSION CONTROLS APPLIED WITHIN 7 DAYS.

TIMING OF CONTROLS/MEASURES

NON-STRUCTURAL PRESERVATION METHODS

PRACTICES SHALL BE USED WHICH PRESERVE THE EXISTING NATURAL CONDITION AS MUCH AS POSSIBLE. SUCH PRACTICES MAY INCLUDE: PRESERVING RIPARIAN AREAS ADJACENT TO SURFACE WATERS OF THE STATE; PRESERVING EXISTING VEGETATION AND VEGETATIVE BUFFER STRIPS; PHASING CONSTRUCTION OPERATIONS IN ORDER TO MINIMIZE THE AMOUNT OF DISTURBED LAND AT ANY ONE TIME; AND DESIGNATION OF TREE PRESERVATION AREAS OR OTHER PROTECTIVE CLEARING OR GRUBBING PRACTICES. THE RECOMMENDED BUFFER THAT OPERATORS SHOULD LEAVE UNDISTURBED ALONG A SURFACE WATER OF THE STATE IS 25 FEET AS MEASURED FROM THE ORDINARY HIGH WATER MARK OF THE SURFACE WATER.

EROSION CONTROL PRACTICES

ALL DISTURBED AREAS OF THE SITE SHALL BE PROTECTED BY STABILIZATION PRACTICES. SUCH PRACTICES MAY INCLUDE: TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, MATTING, SOD STABILIZATION, VEGETATIVE BUFFER STRIPS, PHASING OF CONSTRUCTION OPERATIONS, USE OF CONSTRUCTION ENTRANCES, AND THE USE OF ALTERNATIVE GROUND COVER.

PERMANENT STABILIZATION

THE TIMING SPECIFICATIONS FOR THE PERMANENT SEED CAN BE FOUND IN THE TABLE BELOW. THE PERMANENT SEED SHALL BE APPLIED AS PER THE TEMPORARY SEEDING SPECIFICATIONS. NOTE THAT 70% VEGETATIVE DENSITY IS REQUIRED ON ALL DISTURBED SOIL AREAS FOR STABILIZATION.

AREA REQUIRING PERMANENT STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY AREA THAT WILL BE DORMANT FOR 1 YEAR OR MORE.	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE.
ANY AREAS WITHIN 50 FEET OF SURFACE WATER OF THE STATE AND AT FINAL GRADE.	WITHIN TWO DAYS OF REACHING FINAL GRADE.
ANY OTHER AREAS AT FINAL GRADE.	WITHIN SEVEN DAYS OF REACHING FINAL GRADE WITHIN THAT AREA.

TEMPORARY STABILIZATION

THE TIMING SPECIFICATIONS FOR THE TEMPORARY SEED CAN BE FOUND IN THE TABLE BELOW. THE TEMPORARY SEED SHALL BE APPLIED AS PER THE TEMPORARY SEEDING SPECIFICATIONS. AREAS OF THE SITE WHICH ARE TO BE PAVED WILL BE TEMPORARILY STABILIZED BY APPLYING AGGREGATE BASE UNTIL ASPHALT AND CONCRETE PAVEMENT CAN BE APPLIED. NOTE THAT 70% VEGETATIVE DENSITY IS REQUIRED ON ALL DISTURBED SOIL AREAS FOR STABILIZATION.

AREA REQUIRING TEMPORARY STABILIZATION	TIME FRAME TO APPLY EROSION CONTROLS
ANY DISTURBED AREAS WITHIN 50 FEET OF A SURFACE WATER OF THE STATE AND NOT AT FINAL GRADE.	WITHIN TWO DAYS OF THE MOST RECENT DISTURBANCE IF THE AREA WILL REMAIN IDLE FOR MORE THAN 14 DAYS.
FOR ALL CONSTRUCTION ACTIVITIES, ANY DISTURBED AREAS THAT WILL BE DORMANT FOR MORE THAN 14 DAYS BUT LESS THAN 1 YEAR, AND NOT WITHIN 50 FEET OF A SURFACE WATER OF THE STATE.	WITHIN SEVEN DAYS OF THE MOST RECENT DISTURBANCE WITHIN THE AREA.
DISTURBED AREAS THAT WILL BE IDLE OVER WINTER.	FOR RESIDENTIAL SUBDIVISION, DISTURBED AREAS MUST BE STABILIZED AT LEAST SEVEN DAYS PRIOR TO TRANSFER OF PERMIT COVERAGE FOR THE INDIVIDUAL LOTS). PRIOR TO ONSET OF WINTER WEATHER.

WHERE VEGETATIVE STABILIZATION TECHNIQUES MAY CAUSE STRUCTURAL INSTABILITY OR ARE OTHERWISE UNOBTAINABLE, ALTERNATIVE STABILIZATION TECHNIQUES MUST BE EMPLOYED.

PERMANENT STABILIZATION OF CONVEYANCE CHANNELS

OPERATORS SHALL UNDERTAKE SPECIAL MEASURES TO STABILIZE CHANNELS AND OUTFALLS AND PREVENT EROSION FLOWS. MEASURES MAY INCLUDE: SEEDING, DORMANT SEEDING, MULCHING, EROSION CONTROL MATTING, SODDING, RIPRAP, NATURAL CHANNEL DESIGN WITH BIOENGINEERING TECHNIQUES OR ROCK CHECK DAMS.

RUN-OFF CONTROL PRACTICES

MEASURES SHALL BE IMPLEMENTED WHICH CONTROL THE FLOW OF RUN-OFF FROM DISTURBED AREAS SO AS TO PREVENT EROSION FROM OCCURRING. SUCH PRACTICES MAY INCLUDE: ROCK CHECK DAMS, PIPE SLOPE DRAINS, DIVERSIONS TO DIRECT FLOW AWAY FROM EXPOSED SOILS, AND PROTECTIVE GRADING PRACTICES. THESE PRACTICES SHALL DIVERT RUNOFF AWAY FROM DISTURBED AREAS AND STEEP SLOPES WHERE PRACTICABLE. VELOCITY DISSIPATION DEVICES SHALL BE PLACED AT DISCHARGE LOCATIONS ALONG THE LENGTH OF THE LENGTH OF ANY OUTFALL CHANNEL TO PROVIDE NON-EROSIVE FLOW VELOCITY FROM THE STRUCTURE TO A WATER COURSE SO THAT THE NATURAL PHYSICAL AND BIOLOGICAL CHARACTERISTICS AND FUNCTIONS ARE MAINTAINED AND PROTECTED.

SEDIMENT CONTROL PRACTICES

STRUCTURAL PRACTICES SHALL BE USED TO CONTROL EROSION AND TRAP SEDIMENT FROM A SITE REMAINING DISTURBED FOR MORE THAN 14 DAYS, WHICH STORE RUN-OFF ALLOWING SEDIMENTS TO SETTLE AND/OR DIVERT FLOWS AWAY FROM EXPOSED SOILS OR OTHERWISE LIMIT RUNOFF FROM EXPOSED AREAS. SUCH PRACTICES MAY INCLUDE, BUT AMONG OTHERS: SEDIMENT SETTLING PONDS, SILT FENCES, EARTH DIVERSION DIKES OF CHANNELS WHICH DIRECT RUN-OFF TO A SEDIMENT SETTLING POND, AND STORM DRAIN INLET PROTECTION. ALL SEDIMENT CONTROL PRACTICES MUST BE CAPABLE OF PONDING RUN-OFF IN ORDER TO BE CONSIDERED FUNCTIONAL. EARTH DIVERSION DIKES OR CHANNELS ALONE ARE NOT CONSIDERED A SEDIMENT CONTROL PRACTICE UNLESS THOSE ARE USED IN CONJUNCTION WITH A SEDIMENT SETTLING POND.

PRACTICES IMPLEMENTED IN THIS PLAN:

- SILT FENCES
- COMPOST FILTER SOCKS
- INLET PROTECTION
- OTHER

TIMING

SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL THROUGHOUT THE COURSE OF EARTH DISTURBING ACTIVITY. SEDIMENT BASINS AND PERIMETER SEDIMENT BARRIERS SHALL BE IMPLEMENTED PRIOR TO GRADING AND WITHIN SEVEN DAYS FROM THE START OF GRUBBING. THEY SHALL CONTINUE TO FUNCTION UNTIL THE UP-SLOPE DEVELOPMENT AREA IS RE-STABILIZED AS CONSTRUCTION PROGRESSES AND THE TOPOGRAPHY IS ALTERED. APPROPRIATE CONTROLS MUST BE CONSTRUCTED OR EXISTING CONTROLS ALTERED TO ADDRESS THE CHANGING DRAINAGE PATTERNS.

SILT FENCE AND COMPOST FILTER SOCK

SHEET FLOW RUN-OFF FROM DENUDED AREAS SHALL BE INTERCEPTED BY SILT FENCE OR COMPOST FILTER SOCK TO PROTECT ADJACENT PROPERTIES AND WATER RESOURCES FROM SEDIMENT TRANSPORTED VIA SHEET FLOW WHERE INTENDED TO PROVIDE SEDIMENT CONTROL. SILT FENCE AND COMPOST FILTER SOCK SHALL BE PLACED ON A LEVEL CONTOUR DOWN SLOPE OF THE DISTURBED AREA.

INLET PROTECTION

INLET PROTECTION SHALL BE USED TO MINIMIZE SEDIMENT LOADED WATER ENTERING THE ACTIVE STORM SEWER SYSTEM.

SURFACE WATERS OF THE STATE PROTECTION

IF CONSTRUCTION ACTIVITIES DISTURB AREAS ADJACENT TO SURFACE WATERS OF THE STATE, STRUCTURAL PRACTICES SHALL BE IMPLEMENTED ON-SITE TO PROTECT ALL ADJACENT SURFACE WATERS OF THE STATE FROM THE IMPACTS OF SEDIMENT RUNOFF. NO STRUCTURAL SEDIMENT CONTROLS (E.G., THE INSTALLATION OF SILT FENCE OR A SEDIMENT SETTLING SEDIMENT POND) SHALL BE USED IN A SURFACE WATER OF THE STATE. FOR ALL CONSTRUCTION ACTIVITIES IMMEDIATELY ADJACENT TO SURFACE WATERS OF THE STATE, IT IS RECOMMENDED THAT A SETBACK OF AT LEAST 25 FEET, AS MEASURED FROM THE ORDINARY HIGH WATER MARK OF THE SURFACE WATER, BE MAINTAINED IN ITS NATURAL STATE AS A PERMANENT BUFFER.

SEDIMENT AND EROSION CONTROLS

ANTICIPATED IMPACTS ON WATER QUALITY, ETC. (REFERENCE PAGE 19 OF OHIO EPA'S NPDES PERMIT) (APRIL 23, 2018)

1. REFER TO MAINTENANCE AND INSPECTION PROCEDURE SECTION.
2. RUN-OFF QUANTITY WILL BE CONTROLLED BY THE ON-SITE DETENTION SYSTEM.
3. RUN-OFF QUALITY DURING CONSTRUCTION WILL BE MAINTAINED BY PERIMETER CONTROLS.
4. REFER TO DESCRIPTION OF POST-CONSTRUCTION BMP'S LISTED BELOW.
5. MAINTENANCE PLAN SHALL ENSURE THAT POLLUTANTS COLLECTED WITHIN STRUCTURAL POST-CONSTRUCTION PRACTICES WILL BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS.

POST-CONSTRUCTION BMP WATER QUALITY DESIGN

THE OHIO EPA'S GENERAL PERMIT FOR CONSTRUCTION REQUIRES THE IMPLEMENTATION OF POST-CONSTRUCTION BMP'S ON ALL PROJECTS WHERE THE LARGER COMMON PLAN OF DEVELOPMENT OR SITE DISTURBS ONE OR MORE ACRES.

FOR NEW DEVELOPMENT THE OHIO EPA'S GENERAL CONSTRUCTION PERMIT REQUIRES THAT STRUCTURAL POST-CONSTRUCTION BMP'S BE PROVIDED ON ANY PROJECTS WHERE THE LARGER COMMON PLAN OF DEVELOPMENT OR SITE WILL RESULT IN 2 OR MORE ACRES OF DISTURBANCE. STRUCTURAL BMP'S MUST PROVIDE EXTENDED DETENTION OF THE WATER QUALITY VOLUME (WQV). IN ADDITION, AN EXTRA 20% OF THE (WQV) MUST BE PROVIDED WITHIN THE AREA OF THE BMP WHERE POLLUTANTS WILL ACCUMULATE TO PROVIDE STORAGE FOR THESE POLLUTANTS.

FOR REDEVELOPMENT PROJECTS, THE OHIO EPA'S GENERAL PERMIT REQUIRES EITHER (A) A 20% NET REDUCTION OF SITE IMPERVIOUS AREA, (B) STRUCTURAL BMP'S BE PROVIDED TO TREAT 20% OF THE WQV, OR (C) A COMBINATION OF (A) AND (B) THAT HAS THE SAME NET EFFECT.

NEW DEVELOPMENT (SYSTEM B)

WQV = R*P*A/12
WQV = WATER QUALITY VOLUME IN ACRE-FEET
TOTAL SITE WQV (REQUIRED) = 82 CUBIC FEET

REDEVELOPMENT (SYSTEM A)

WQV = P*A*(R1+0.2)-(R2-R1)/12
WQV = WATER QUALITY VOLUME IN ACRE-FEET
TOTAL SITE WQV (REQUIRED) = 82 CUBIC FEET

TOTAL SITE WQV (PROVIDED) = 907 CUBIC FEET

POST-CONSTRUCTION STORM WATER MANAGEMENT

NON-SEDIMENT POLLUTANT CONTROLS

NON-SEDIMENT POLLUTANT SOURCES, WHICH MAY BE PRESENT ON A CONSTRUCTION SITE, INCLUDE PAVING OPERATIONS, CONCRETE WASHOUT STRUCTURE PAINTING, STRUCTURE CLEANING, DEMOLITION DEBRIS DISPOSAL, DRILLING AND BLASTING OPERATIONS, MATERIAL STORAGE, SLAG, SOLID WASTE, HAZARDOUS WASTE, CONTAMINATED SOILS, SANITARY AND SEPTIC WASTES, VEHICLE FUELING AND MAINTENANCE ACTIVITIES, AND LANDSCAPING OPERATIONS.

HANDLING OF TOXIC OR HAZARDOUS MATERIALS

ALL HAZARDOUS AND TOXIC WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. NO TOXIC OR HAZARDOUS WASTES SHALL BE DISPOSED OF INTO STORM DRAINS, SEPTIC TANKS, OR BY BURYING, BURNING, OR MIXING THE WASTES.

WASTE DISPOSAL

CONTAINERS SHALL BE PROVIDED FOR THE PROPER COLLECTION OF ALL WASTE MATERIAL INCLUDING CONSTRUCTION DEBRIS, TRASH, PETROLEUM PRODUCTS AND ANY HAZARDOUS MATERIALS USED ON-SITE. CONTAINERS SHALL BE COVERED AND NOT LEAKING. ALL WASTE MATERIAL SHALL BE DISPOSED OF AT FACILITIES APPROVED FOR THAT MATERIAL. CONSTRUCTION DEMOLITION AND DEBRIS (CDAC) WASTE MUST BE DISPOSED OF AT AN OHIO EPA APPROVED COAG. LANDFILL. NO CONSTRUCTION RELATED WASTE MATERIALS ARE TO BE BURIED ON-SITE. BY EXCEPTION, CLEAN-FILL (BRICKS, HARDENED CONCRETE, SOIL) MAY BE UTILIZED IN A WAY WHICH DOES NOT ENCRUST UPON NATURAL WETLANDS, STREAMS OR FLOODPLAINS OR RESULT IN THE CONTAMINATION OF WATERS OF THE STATE.

SANITARY WASTE DISPOSAL

ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NECESSARY BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR, AS REQUIRED BY LOCAL REGULATION.

CLEAN HARD FILL

ALL BRICKS, HARDENED CONCRETE, AND SOIL WASTE MUST BE FREE FROM CONTAMINATION WHICH MAY LEACH CONSTITUENTS TO WATERS OF THE STATE. ANY CLEAN CONSTRUCTION WASTES THAT WILL BE DISPOSED INTO THE PROPERTY MUST MEET ALL LOCAL, CITY, AND STATE REGULATIONS.

CONSTRUCTION AND DEMOLITION DEBRIS

ALL CONSTRUCTION AND DEMOLITION DEBRIS WASTE WILL BE DISPOSED OF IN AN OHIO EPA APPROVED CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL AS REQUIRED BY OHIO REVISED CODE 3714.

OFF-SITE VEHICLE TRACKING

OFF-SITE VEHICLE TRACKING SEDIMENT SHALL BE MINIMIZED. CONSTRUCTION VEHICLES ARE LIMITED TO THE CONSTRUCTION ACCESS ROADS NOTED ON THE PLAN. A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. ALL PAVED STREETS ADJACENT TO THE SITE WILL BE SWEEP AS NECESSARY TO REMOVE ANY EXCESS MUD, DIRT, AND ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARP/PAULIN.

OPEN BURNING

THE CONTRACTOR SHALL ONLY PERFORM ON-SITE OPEN BURNING AS A MEANS OF WASTE DISPOSAL AS ALLOWED PER LOCAL, STATE, AND FEDERAL REGULATIONS.

DUST CONTROL

CONSTRUCTION TRAFFIC MUST ENTER AND EXIT THE SITE AT THE STABILIZED CONSTRUCTION ENTRANCE(S). WATER TRUCKS WILL BE USED AS NEEDED DURING CONSTRUCTION TO REDUCE DUST GENERATION. DUST CONTROL MUST BE PROVIDED TO A DEGREE THAT IS ACCEPTABLE AND IN COMPLIANCE WITH APPLICABLE LOCAL AND STATE DUST CONTROL REGULATIONS. AFTER CONSTRUCTION, THE SITE WILL BE STABILIZED (AS DESCRIBED ELSEWHERE IN THIS PLAN), WHICH WILL REDUCE THE POTENTIAL FOR DUST GENERATION.

PRODUCT SPECIFIC PRACTICES

THE FOLLOWING SPECIFIC PRACTICES WILL BE FOLLOWED ON-SITE:

FERTILIZERS

FERTILIZERS WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PETROLEUM PRODUCTS

ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON-SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. ALL CONTAMINATED SOILS MUST BE TREATED AND/OR DISPOSED OF IN OHIO EPA APPROVED SOLID WASTE MANAGEMENT FACILITIES OR HAZARDOUS WASTE TREATMENT, STORAGE OR DISPOSAL FACILITIES.

PAINTS

THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS WILL BE THE SPILL PREVENTION AND CLEAN UP COORDINATOR. ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

CONCRETE TRUCKS

CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE EXCEPT IN AREAS SPECIFICALLY DESIGNATED BY THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS.

OTHER CONTROLS

PROPOSED CORE AND SHELL BUILDING:

Convergent East

2 Equity Way
Westlake, OH 44145

JOB NUMBER: 180393.00

DRAWING RELEASE:

No.	Date	Description
	01/04/2019	Permit/Bid Set

SHEET TITLE:

SESC DETAILS

SHEET NUMBER:

CE501

SITE PREPARATION

- A SUBSOILER, PLOW OR OTHER IMPLEMENT SHALL BE USED TO REDUCE SOIL COMPACTION AND ALLOW MAXIMUM INFILTRATION. (MAXIMIZING INFILTRATION WILL HELP CONTROL BOTH RUNOFF RATE AND WATER QUALITY). SUBSOILING SHOULD BE DONE WHEN THE SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING SHALL NOT BE DONE ON SLIP-PRONE AREAS WHERE SOIL PREPARATION SHOULD BE LIMITED TO WHAT IS NECESSARY FOR ESTABLISHING VEGETATION.
- THE SITE SHALL BE GRADED AS NEEDED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
- TOPSOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION.

SEEDBED PREPARATION

- LIME - AGRICULTURAL GROUND LIMESTONE SHALL BE APPLIED TO ACID SOIL AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, LIME SHALL BE APPLIED AT THE RATE OF 100 POUNDS PER 1,000 SQ FT OR 2 TONS PER ACRE.
- FERTILIZER - FERTILIZER SHALL BE APPLIED AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, FERTILIZER SHALL BE APPLIED AT A RATE OF 100 POUNDS PER 1,000 SQ FT OR 1000 POUNDS PER ACRE OF A 10-10-10 OR 12-12-12 ANALYSES.
- THE LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL WITH A DISK HARROW, SPRING-TOOTH HARROW, OR OTHER SUITABLE FIELD IMPLEMENT TO A DEPTH OF 3 INCHES ON SLOPING LAND. THE SOIL SHALL BE WORKED ON THE CONTOUR.

SEEDING DATES AND SOIL CONDITIONS

SEEDING SHOULD BE DONE MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30, IF SEEDING OCCURS OUTSIDE OF THE ABOVE-SPECIFIED DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF SOIL GERMINATION. TILLAGE OR SEEDING SHOULD BE DONE WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND. FOR WINTER SEEDING, SEE THE FOLLOWING SECTION ON DORMANT SEEDING.

DORMANT SEEDINGS

- SEEDINGS SHOULD NOT BE MADE FROM OCTOBER 1 THROUGH NOVEMBER 30, DURING THIS PERIOD, THE SEEDS ARE LIKELY TO GERMINATE BUT PROBABLY WILL NOT BE ABLE TO SURVIVE THE WINTER.
- THE FOLLOWING METHODS MAY BE USED FOR "DORMANT SEEDING"
 - FROM OCTOBER 1 THROUGH NOVEMBER 20, PREPARE THE SEEDBED, ADD THE REQUIRED AMOUNTS OF LIME AND FERTILIZER, THEN MULCH AND ANCHOR. AFTER NOVEMBER 20, AND BEFORE MARCH 15, BROADCAST THE SELECTED SEED MIXTURE. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.
 - FROM NOVEMBER 20 THROUGH MARCH 15, WHEN SOIL CONDITIONS PERMIT, PREPARE THE SEEDBED, LIME AND FERTILIZE. APPLY THE SELECTED SEED MIXTURE, MULCH AND ANCHOR. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.

- APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRO-SEEDER (SLURRY MAY INCLUDE SEED AND FERTILIZER) ON A FIRM MOIST SEEDBED.
- WHERE FEASIBLE, EXCEPT WHEN A CULTIPACKER TYPE SEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A CULTIPACKER, ROLLER OR LIGHT DRAG ON SLOPING LAND. SEEDING OPERATIONS SHOULD BE ON THE CONTOUR WHERE FEASIBLE.

MULCHING

- MULCH MATERIAL SHALL BE APPLIED IMMEDIATELY AFTER SEEDING. DORMANT SEEDING SHALL BE MULCHED. 100% OF THE GROUND SURFACE SHALL BE COVERED WITH AN APPROVED MATERIAL.

MATERIALS

- STRAW - IF STRAW IS USED IT SHALL BE UNROTTED SMALL-GRAIN STRAW APPLIED AT THE RATE OF 2 TONS PER ACRE OR 90 POUNDS (TWO TO THREE BALES) PER 1000 SQ FT. THE MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY APPLIED SO THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1000 SQ FT SECTIONS AND SPREAD TWO 45 LB BALES OF STRAW IN EACH SECTION.
- HYDROSEEDERS - IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE APPLIED AT 2000 LB/AC OR 46 LB/1000 SQ FT.
- OTHER - OTHER ACCEPTABLE MULCHES INCLUDE ROLLED EROSION CONTROL MATTINGS OR BLANKETS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TONS PER ACRE.

STRAW AND MULCH ANCHORING METHODS

- STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER.
- MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED, BUT GENERALLY BE LEFT LONGER THAN 6 INCHES.
- MULCH NETTING - NETTING SHALL BE USED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF AND ON CRITICAL SLOPES.
- ASPHALT EMULSION - ASPHALT SHALL BE APPLIED AS RECOMMENDED BY THE MANUFACTURER OR AT THE RATE OF 160 GALLONS PER ACRE.
- SYNTHETIC BINDERS - SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TRACK OR EQUIVALENT MAY BE USED AT RATES SPECIFIED BY THE MANUFACTURER. WOOD CELLULOSE FIBER - WOOD CELLULOSE FIBER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER WITH THE MIXTURE CONTAINING A MAXIMUM OF 90 POUNDS CELLULOSE PER 100 GALLONS OF WATER.

IRRIGATION

PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY WEATHER OR ON ADVERSE SITE CONDITIONS WHICH REQUIRE ADEQUATE MOISTURE FOR SEED GERMINATION AND PLANT GROWTH.

IRRIGATION RATES SHALL BE MONITORED TO PREVENT EROSION AND DAMAGE TO SEEDING AREAS FROM EXCESSIVE RUNOFF.

TEMPORARY SEEDING SPECIES SELECTION

SEEDING DATES	SPECIES	LB./1,000 FT ²	LB/PER AC.
MARCH 1 TO AUGUST 15	OATS	3	128 (4 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1.25	55
	PERENNIAL RYEGRASS	3.25	142
	CREeping RED FESCUE	0.4	17
	KENTUCKY BLUEGRASS	0.4	17
AUGUST 16 TO NOVEMBER 1	OATS	3	128 (3 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	RYE	3	112 (2 BUSHEL)
	TALL FESCUE	1	40
NOVEMBER 1 TO FEBRUARY 29	ANNUAL RYEGRASS	1	40
	WHEAT	3	120 (2 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1.25	40
	PERENNIAL RYEGRASS	3.25	40
	CREeping RED FESCUE	0.4	40
	KENTUCKY BLUEGRASS	0.4	40

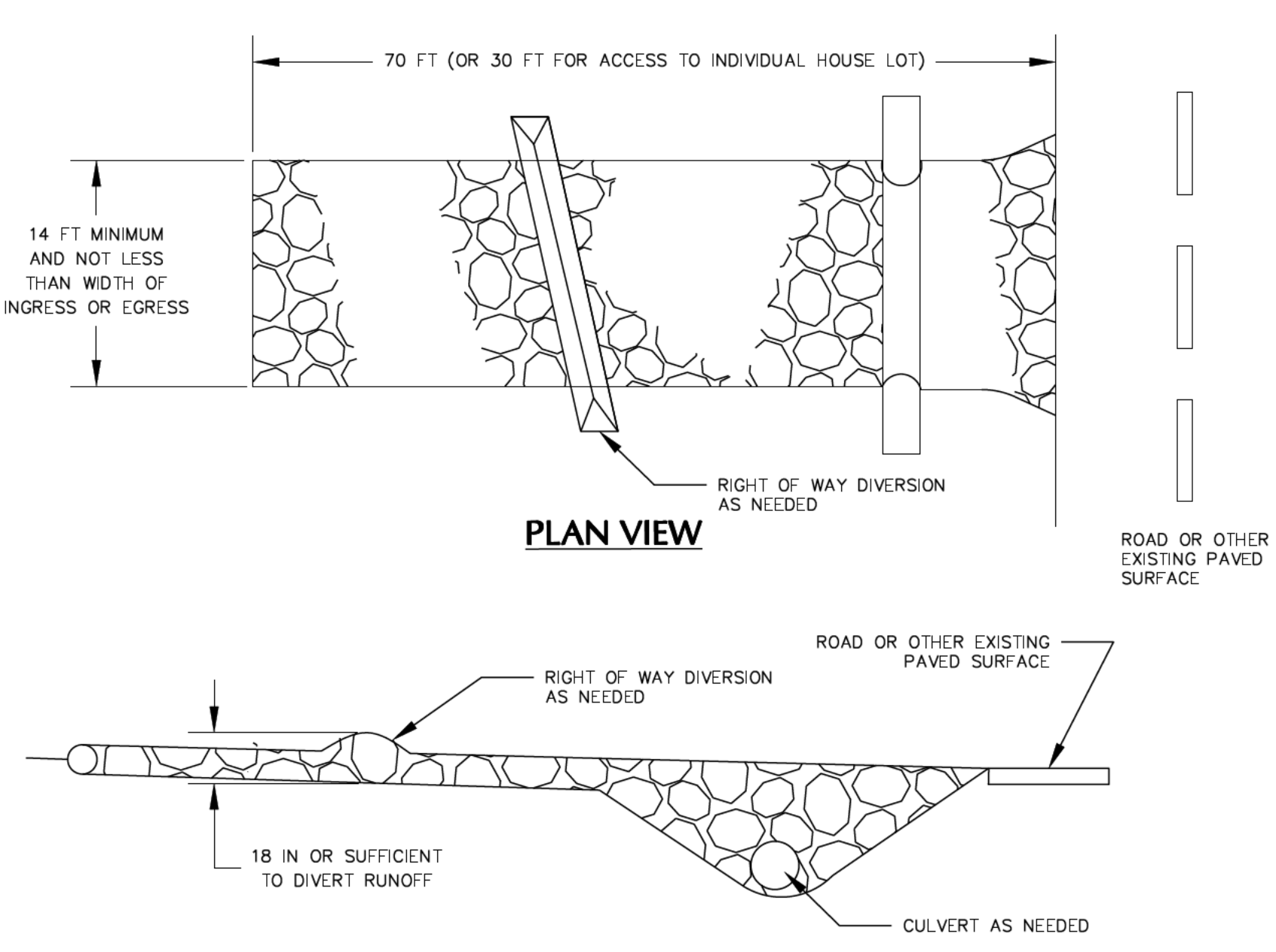
NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED

GENERAL NOTES:

- STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION-SITE.
- TEMPORARY SEED SHALL BE APPLIED BETWEEN CONSTRUCTION OPERATIONS ON SOIL THAT WILL NOT BE GRADED OR REWORKED FOR 21 DAYS OR GREATER. THESE IDLE AREAS SHALL BE SEEDING WITHIN 7 DAYS AFTER GRADING.
- THE SEEDBED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION. TEMPORARY SEEDING SHOULD NOT BE POSTPONED IF IDEAL SEEDBED PREPARATION IS NOT POSSIBLE.

MULCHING TEMPORARY SEEDING:

- APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH, WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDINGS MADE DURING OPTIMUM SEEDING DATES ON FAVORABLE, VERY FLAT SOIL CONDITIONS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION.
- MATERIALS:
 - STRAW - IF STRAW IS USED, IT SHALL BE UNROTTED SMALL-GRAIN STRAW APPLIED AT A RATE OF 2 TONS PER ACRE OR 90 LBS/1000 SQ FT (2-3 BALES).
 - HYDROSEEDERS - IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE USED AT 2000 LBS/AC OR 46 LB/1000 SQ FT.
 - OTHER - OTHER ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TON/AC.
- STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER. ANCHORING METHODS:
 - MECHANICAL - A DISK, CRUMPER, OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT LEFT TO A LENGTH OF APPROXIMATELY 6 INCHES.
 - MULCH NETTING - NETTING SHALL BE USED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF AND ON CRITICAL SLOPES.
 - SYNTHETIC BINDERS - SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70, PETROSET, TERRA TRACK OR EQUIVALENT MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER.
 - WOOD-CELLULOSE FIBER - WOOD-CELLULOSE FIBER BINDER SHALL BE APPLIED AT A NET DRY WT OF 750 LB/AC. THE WOOD-CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 90 LB/GAL.



- NOTES:**
- STONE SIZE - ODOT #2 (1.5-2.5 INCH) STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
 - LENGTH - THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 70 FT (EXCEPTION: APPLY 30 FT MINIMUM TO SINGLE RESIDENCE LOTS).
 - THICKNESS - THE STONE LAYER SHALL BE AT LEAST 6 INCHES THICK FOR LIGHT DUTY ENTRANCES OR AT LEAST 10 INCHES FOR HEAVY DUTY USE.
 - WIDTH - THE ENTRANCE SHALL BE AT LEAST 15 FEET WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
 - GEOTEXTILE - A GEOTEXTILE SHALL BE LAID OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS AND MEET THE FOLLOWING SPECIFICATIONS:

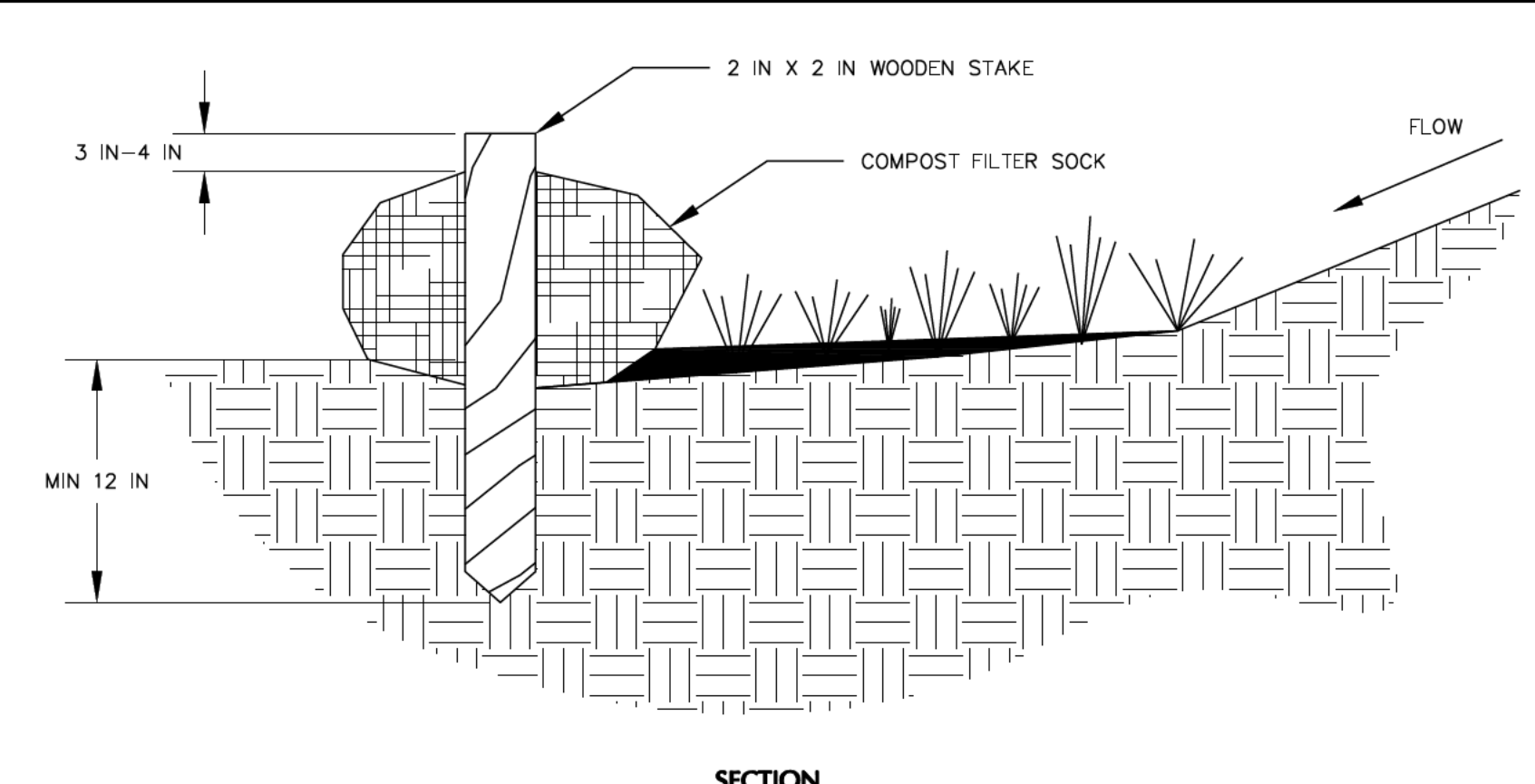
GEOTEXTILE SPECIFICATION FOR CONSTRUCTION ENTRANCE	
MINIMUM TENSILE STRENGTH	200 LBS
MINIMUM PUNCTURE STRENGTH	90 PSI
MINIMUM TEAR STRENGTH	50 LBS
MINIMUM BURST STRENGTH	320 PSI
MINIMUM ELONGATION	20%
EQUIVALENT OPENING SIZE	EOS < 0.6 mm
PERMITTIVITY	1X10-3 cm/sec

- TIMING - THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.
- CULVERT - A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
- WATER BAR - A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
- MAINTENANCE - TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
- CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
- REMOVAL - THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.

SEED MIX	SEEDING RATE		NOTES:
	LB/AC	LB/1000 FT ²	
GENERAL USE			
CREeping RED FESCUE	20-40	5-11	FOR CLOSE MOWING & FOR WATERWAYS WITH <2.0 FT/SEC VELOCITY
DOMESTIC RYGRASS	10-20	2.5-5	
KENTUCKY BLUEGRASS	10-20	2.5-5	
TALL FESCUE	40-50	1-1.25	DO NOT SEED LATER THAN AUGUST
TURF-TYPE (DWARF) FESCUE	90	2.25	
STEEP BANKS OR CUT SLOPES			
TALL FESCUE	40-50	1-1.25	DO NOT SEED LATER THAN AUGUST
CROWN VETCH	10-20	2.5-5	
TALL FESCUE	20-30	5-7.5	
FLAT PEA	20-25	5-7.5	DO NOT SEED LATER THAN AUGUST
TALL FESCUE	20-30	5-7.5	
ROAD DITCHES AND SWALES			
TALL FESCUE	40-50	1-1.25	DO NOT SEED LATER THAN AUGUST
TURF-TYPE (DWARF) FESCUE	90	2.25	
KENTUCKY BLUEGRASS	5	0.1	
LAWNS			
KENTUCKY BLUEGRASS	100-120	2	FOR SHADED AREAS
PERENNIAL RYEGRASS	100-120	2	
CREeping RED FESCUE	100-120	2	

NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED

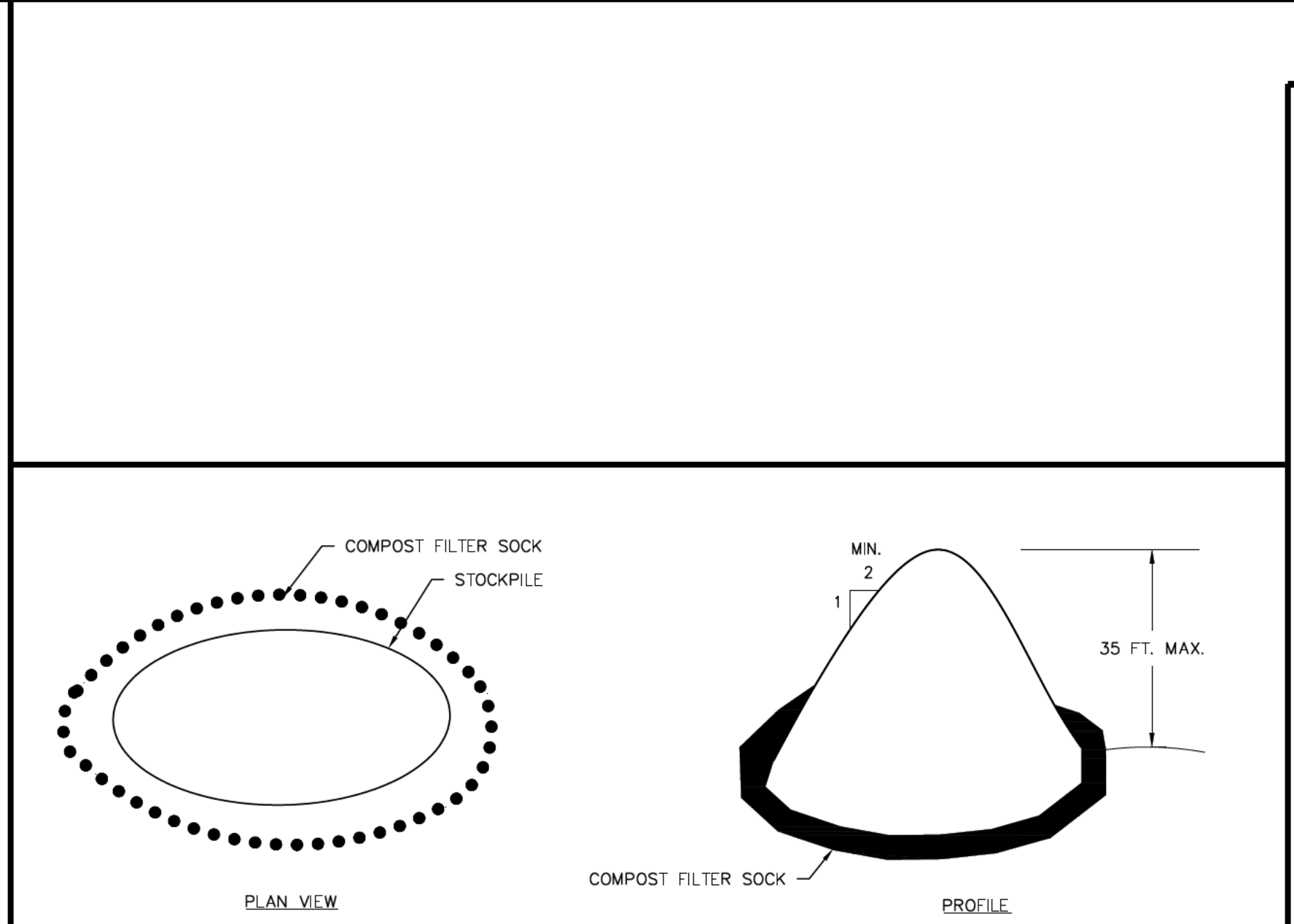
SPECIFICATIONS FOR PERMANENT SEEDING



- NOTES:**
- MATERIALS - COMPOST USED FOR COMPOST FILTER SOCKS SHALL BE WEED, PATHOGEN AND INSECT FREE AND FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH. THEY SHALL BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER AND CONSIST OF PARTICLES RANGING FROM 3/8 IN TO 2 IN.
 - COMPOST FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPE 3/8 IN KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST PASSING THE ABOVE SPECIFICATIONS FOR COMPOST PRODUCTS.
 - CONTRACTOR SHALL USE COMPOST FILTER SOCK WHEN PAVEMENT SURFACE PROHIBITS THE USE OF SILT FENCE.
- INSTALLATION:**
- COMPOST FILTER SOCKS WILL BE PLACED ON A LEVEL LINE ACROSS SLOPES, GENERALLY PARALLEL TO THE BASE OF THE SLOPE OR OTHER AFFECTED AREA. ON SLOPES APPROACHING 2:1, ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEEDED MID-SLOPE.
 - COMPOST FILTER SOCKS INTENDED TO BE LEFT AS A PERMANENT FILTER OR PART OF THE NATURAL LANDSCAPE, SHALL BE SEEDING AT THE TIME OF INSTALLATION FOR ESTABLISHMENT OF PERMANENT VEGETATION.
 - COMPOST FILTER SOCKS ARE NOT TO BE USED IN CONCENTRATED FLOW SITUATIONS OR IN RUNOFF CHANNELS.
- MAINTENANCE:**
- ROUTINELY INSPECT COMPOST FILTER SOCKS AFTER EACH SIGNIFICANT RAIN, MAINTAINING COMPOST FILTER SOCKS IN A FUNCTIONAL CONDITION AT ALL TIMES APPROXIMATING 2:1. ADDITIONAL SOCKS SHALL BE PROVIDED AT THE TOP AND AS NEEDED MID-SLOPE.
 - REMOVE SEDIMENTS COLLECTED AT THE BASE OF THE COMPOST FILTER SOCKS WHEN THEY REACH 1/3 OF THE EXPOSED HEIGHT OF THE PRACTICE.
 - WHERE THE COMPOST FILTER SOCK DETERIORATES OR FAILS, IT WILL BE REPAIRED OR REPLACED WITH A MORE EFFECTIVE ALTERNATIVE.
 - REMOVAL - COMPOST FILTER SOCKS WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED IN SUCH A WAY AS TO FACILITATE AND NOT OBSTRUCT SEEDINGS, OR REMOVED AND DISPOSED OF OFF-SITE.

COMPOST FILTER SOCK

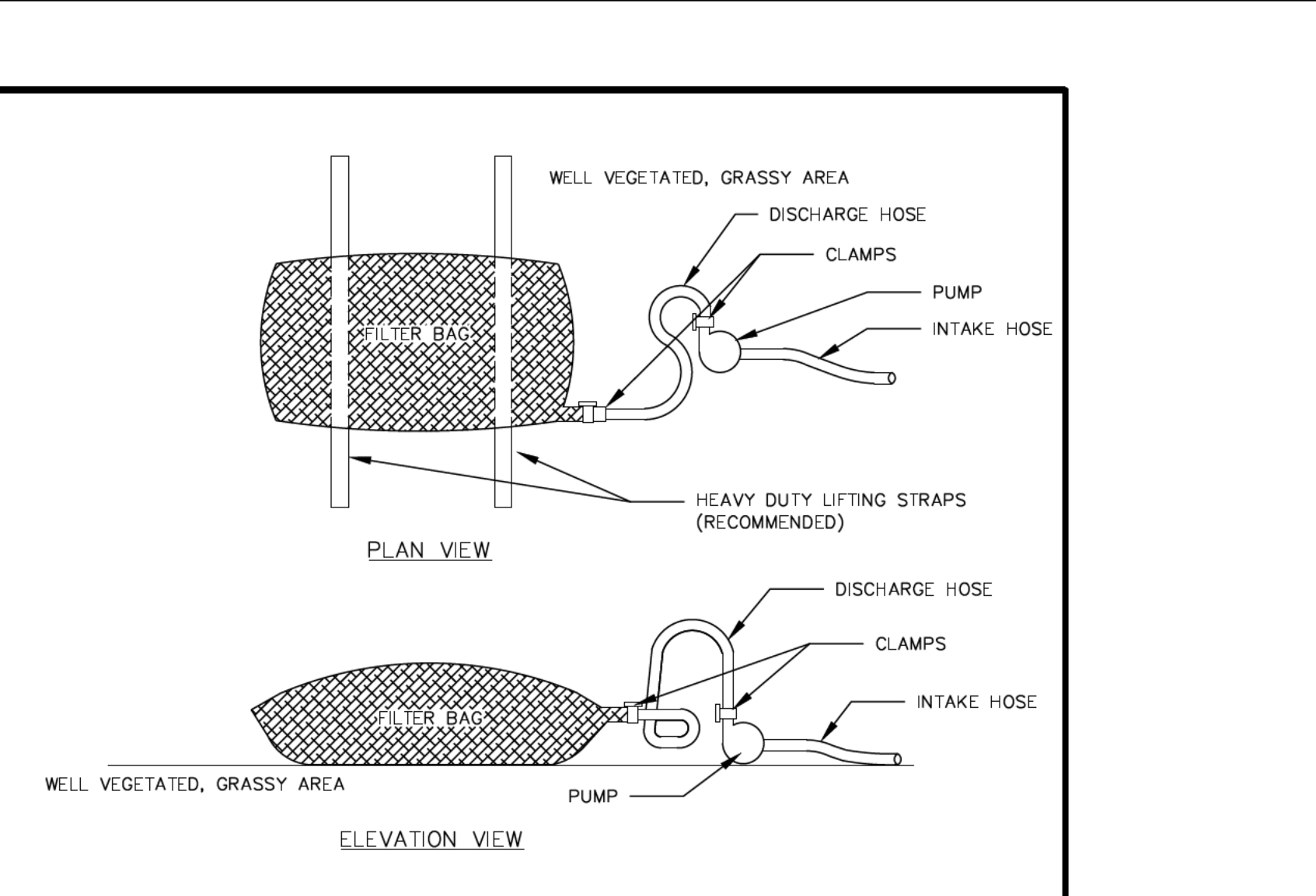
SPECIFICATIONS FOR TEMPORARY SEEDING



- NOTE:**
- COMPOST FILTER SOCK MUST BE PLACED DOWNSLOPE OF ALL STOCKPILES (AS SHOWN ON PLAN). IMMEDIATELY APPLY TEMPORARY SEEDING TO ALL STOCKPILES WHICH WILL REMAIN IN PLACE 20 DAYS OR MORE.
- MAINTENANCE NOTES:**
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
 - WHEN TEMPORARY REMOVAL OF A PERIMETER BMP IS NECESSARY TO ACCESS A STOCKPILE, ENSURE BMPs ARE REINSTALLED IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAIL SECTION.
 - WHEN THE STOCKPILE IS NO LONGER NEEDED, PROPERLY DISPOSE OF EXCESS MATERIALS AND REVEGETATE OR OTHERWISE STABILIZE THE GROUND SURFACE WHERE THE STOCKPILE WAS LOCATED.
 - STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.
 - STOCKPILES SHALL BE INSPECTED DAILY AND NOTED DEFICIENCIES SHALL BE PROMPTLY ADDRESSED.

STOCKPILE AREA

ROCK CONSTRUCTION ENTRANCE



- NOTES:**
- LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
 - A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRIPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.
 - BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.
 - THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.
 - THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOWING AND SCREENED.
 - FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

GEOTEXTILE FILTER BAG

PROPOSED CORE AND SHELL BUILDING:

Convergent East

2 Equity Way
Westlake, OH 44145

JOB NUMBER: 180393.00

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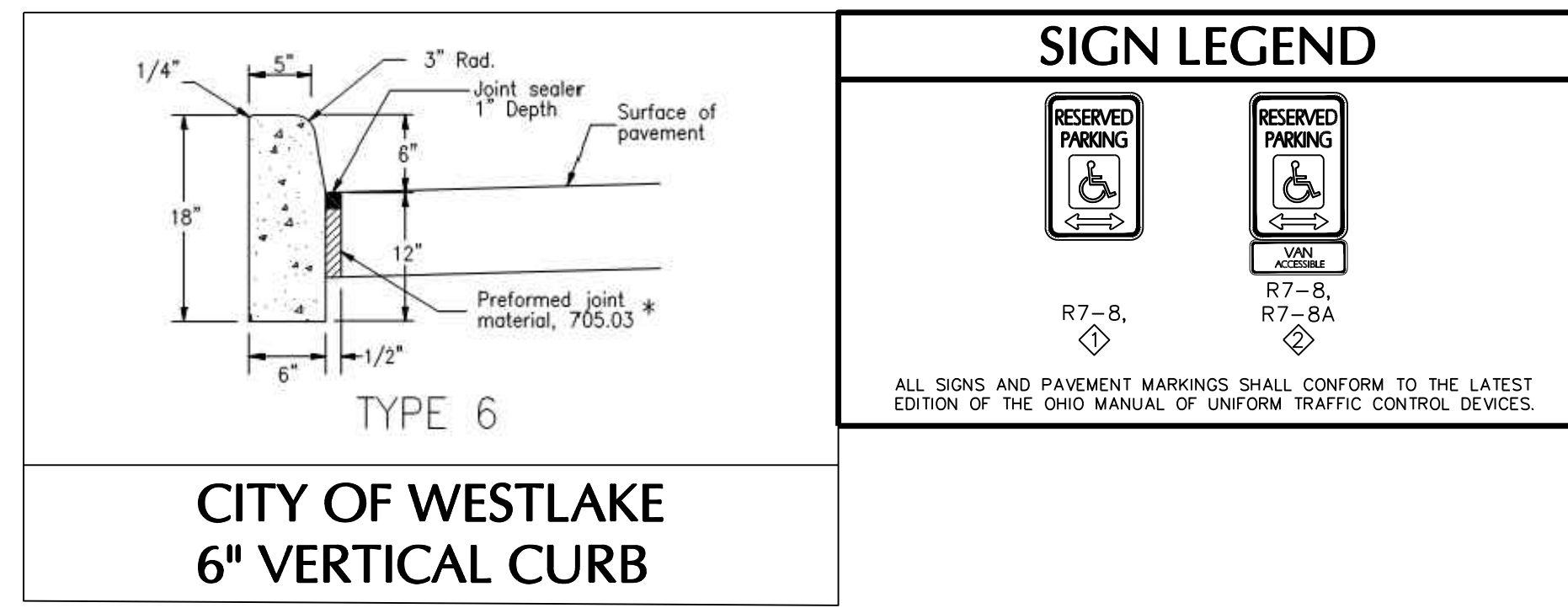
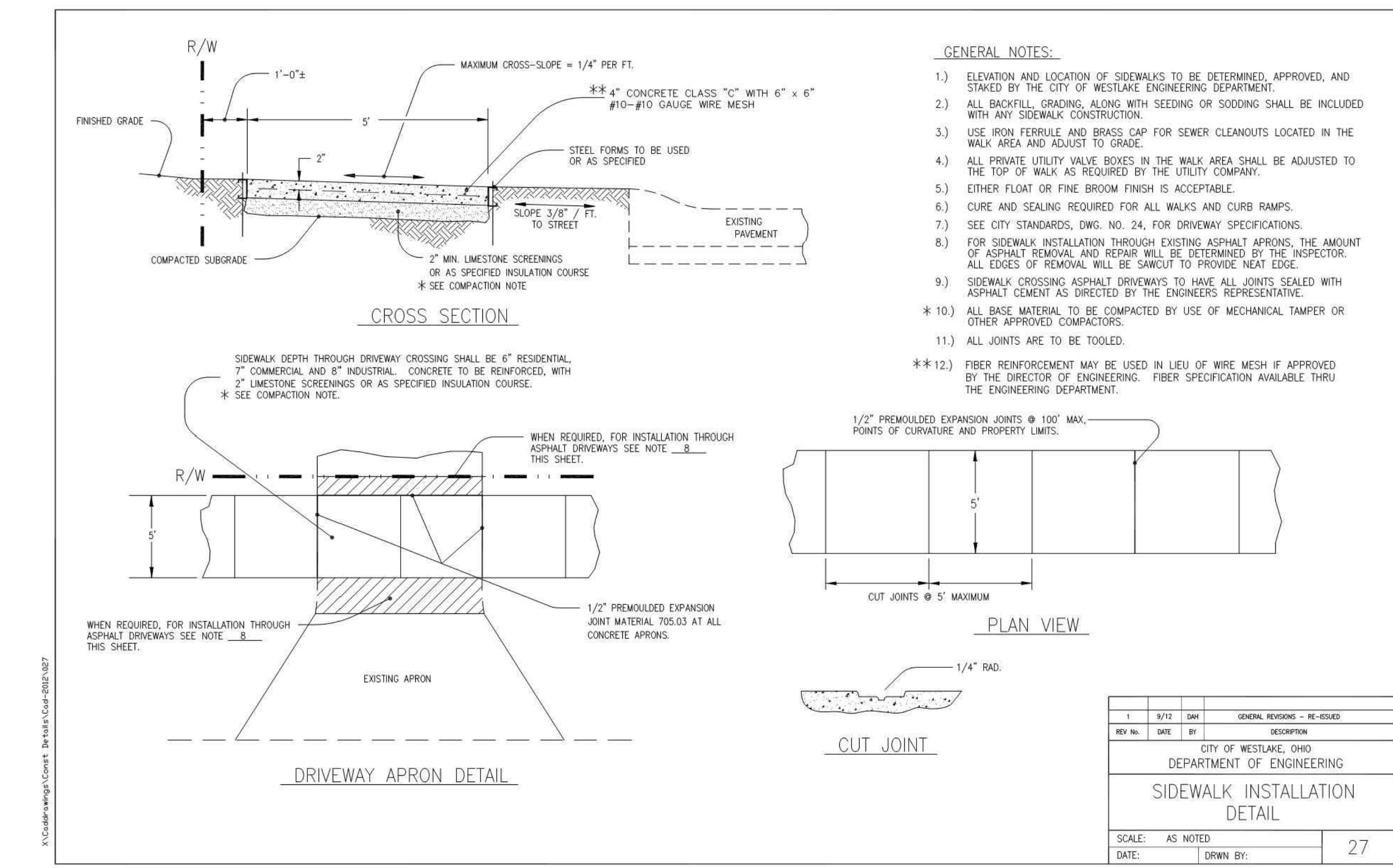
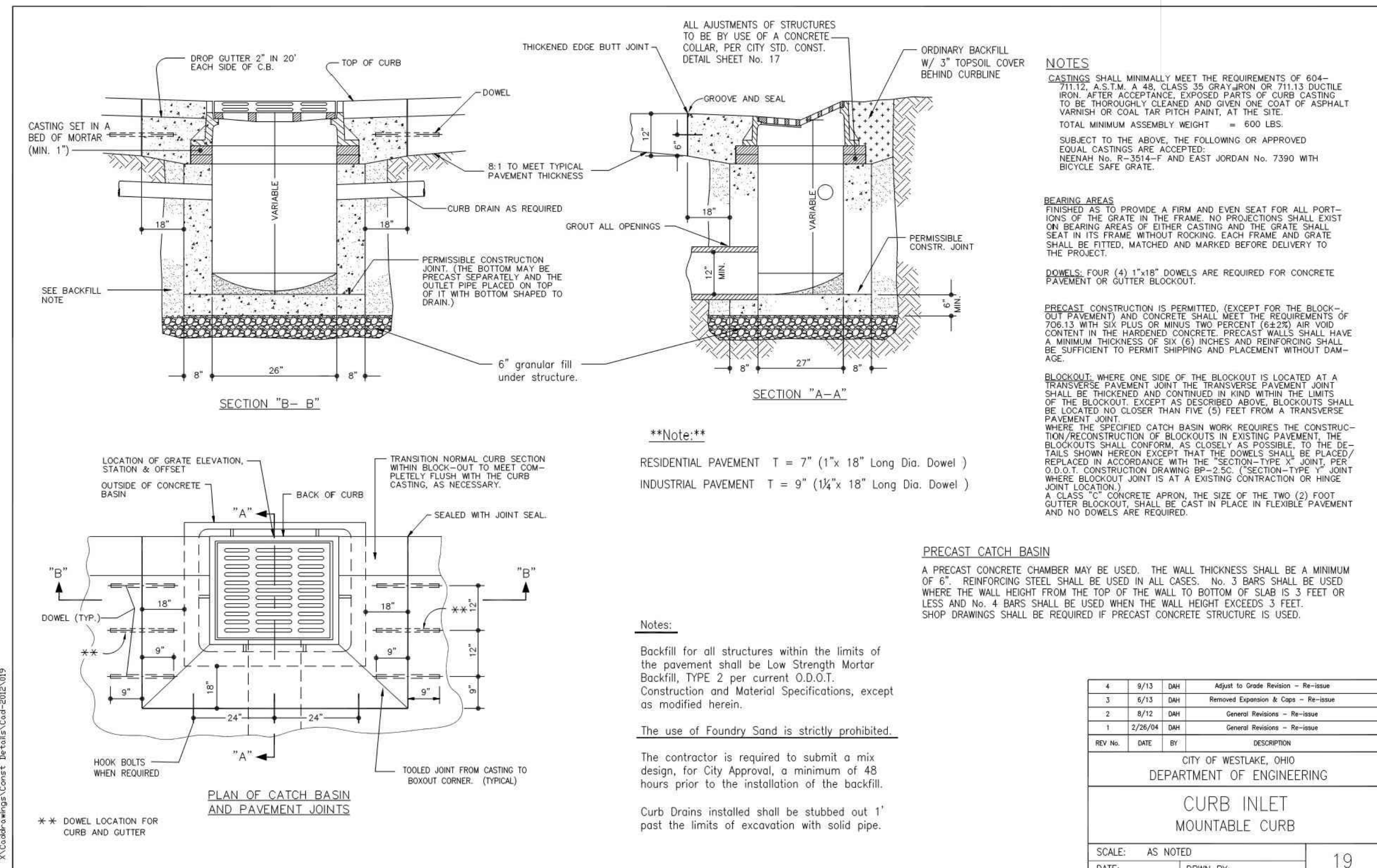
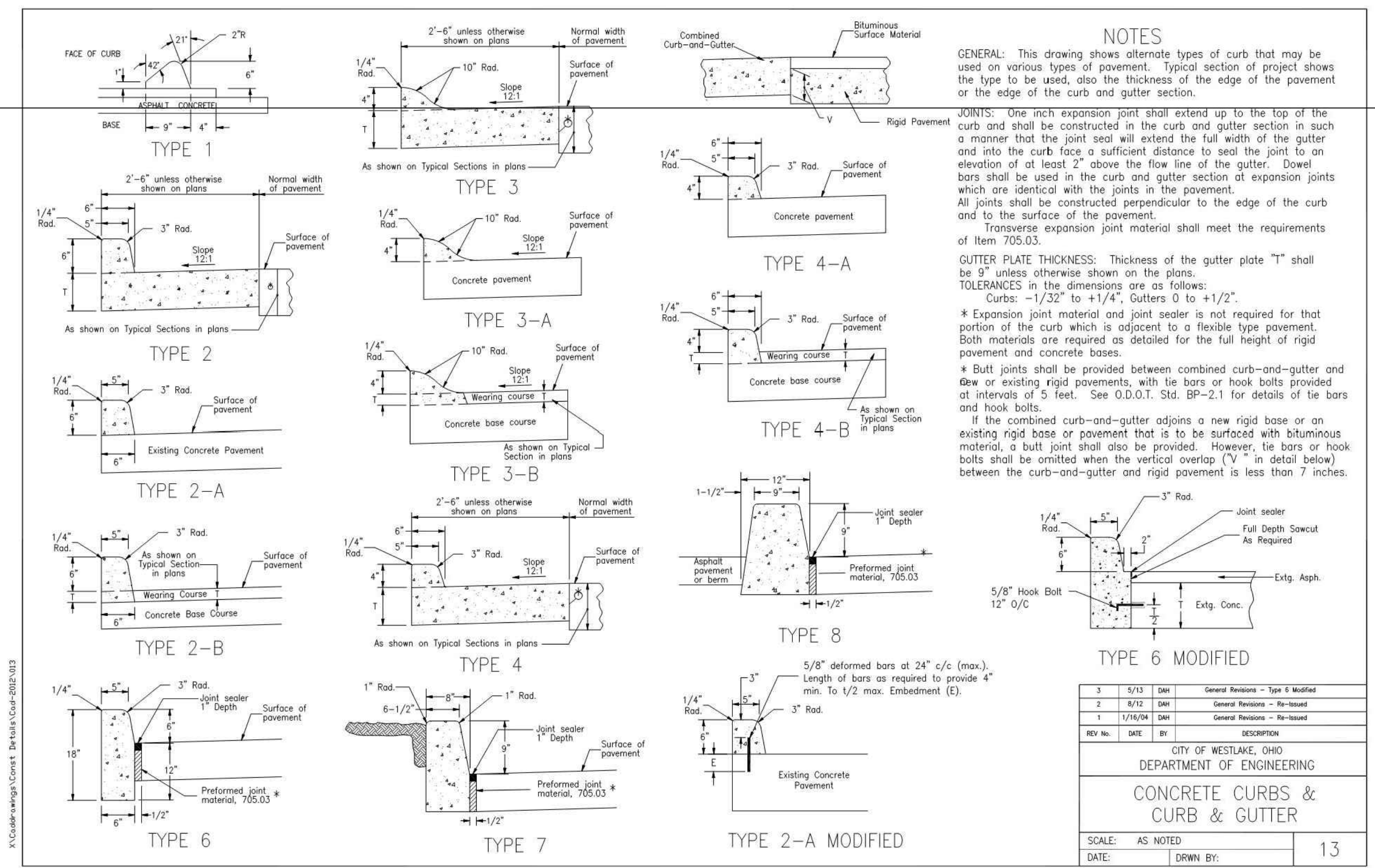
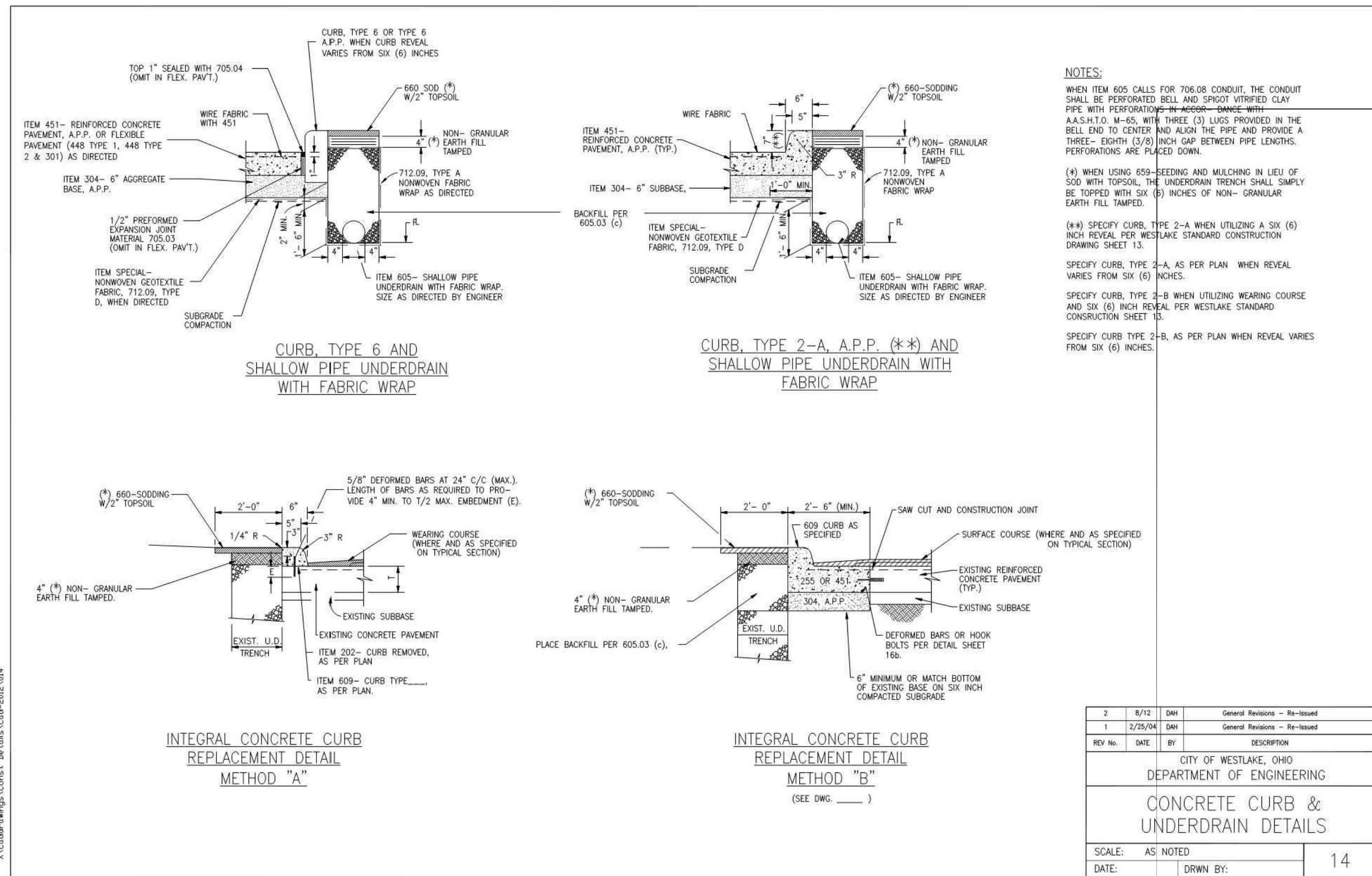
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SESC DETAILS

SHEET NUMBER:

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PROPOSED CORE AND SHELL BUILDING:

Convergent East

2 Equity Way
Westlake, OH 44145

JOB NUMBER: 180393.00

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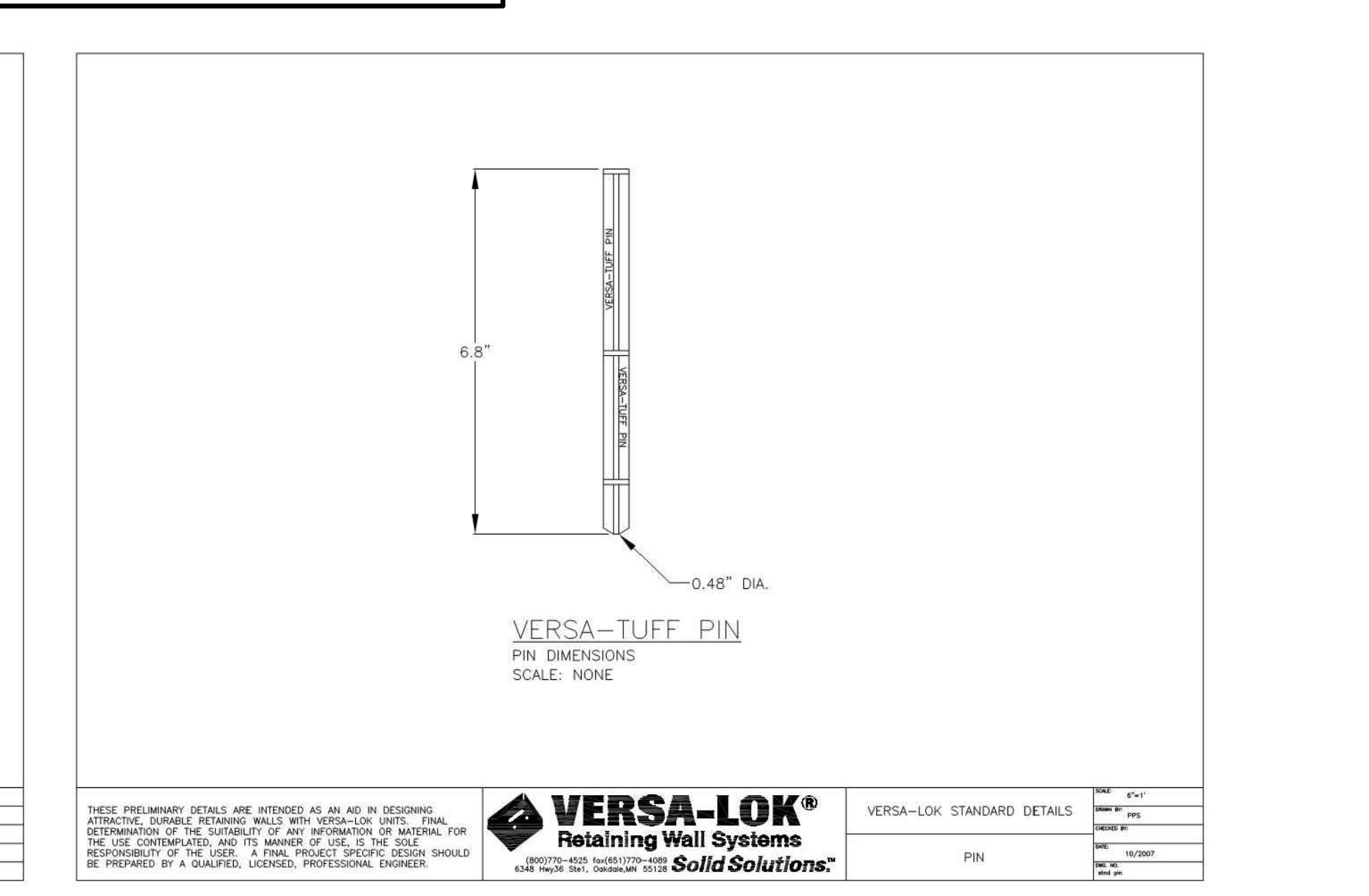
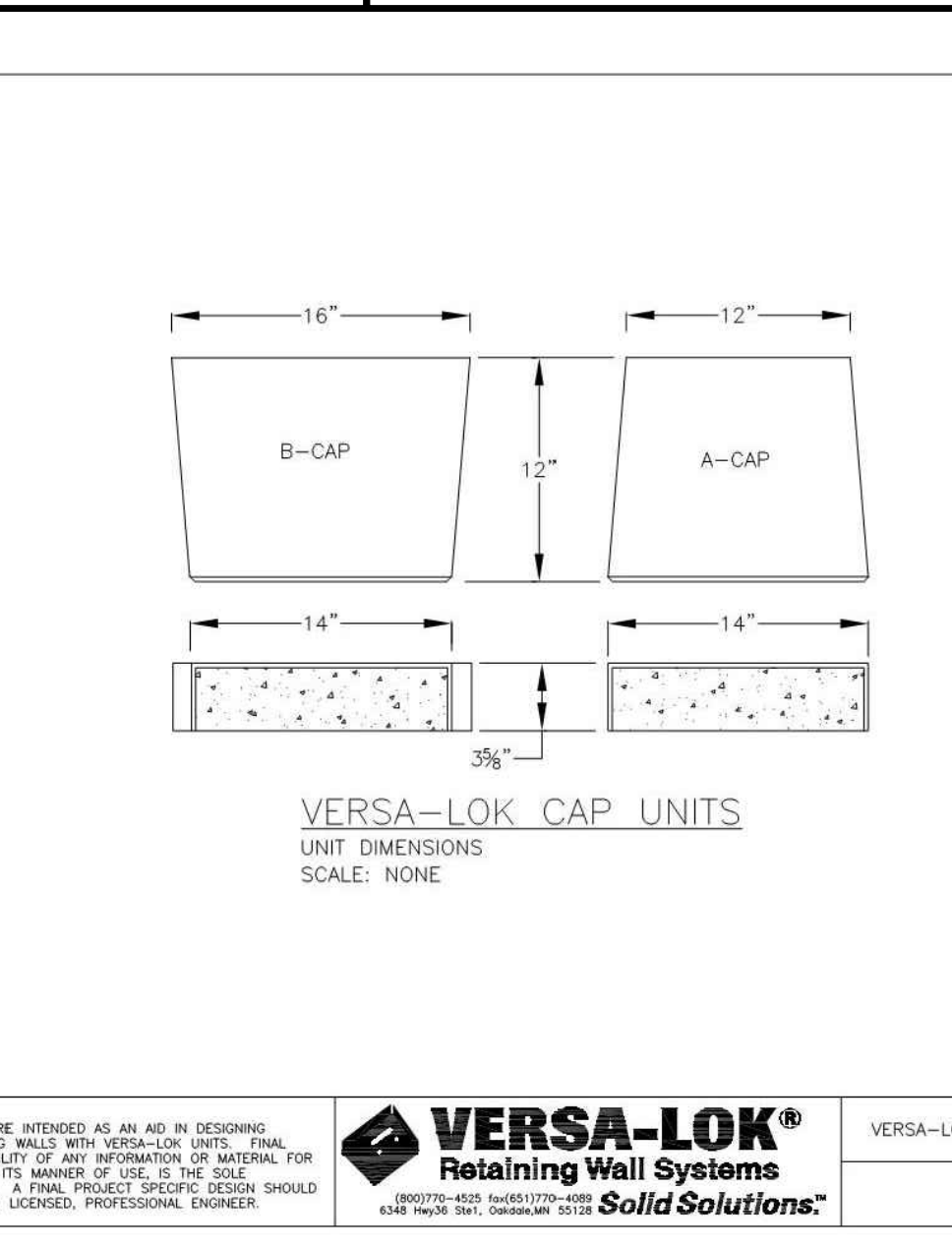
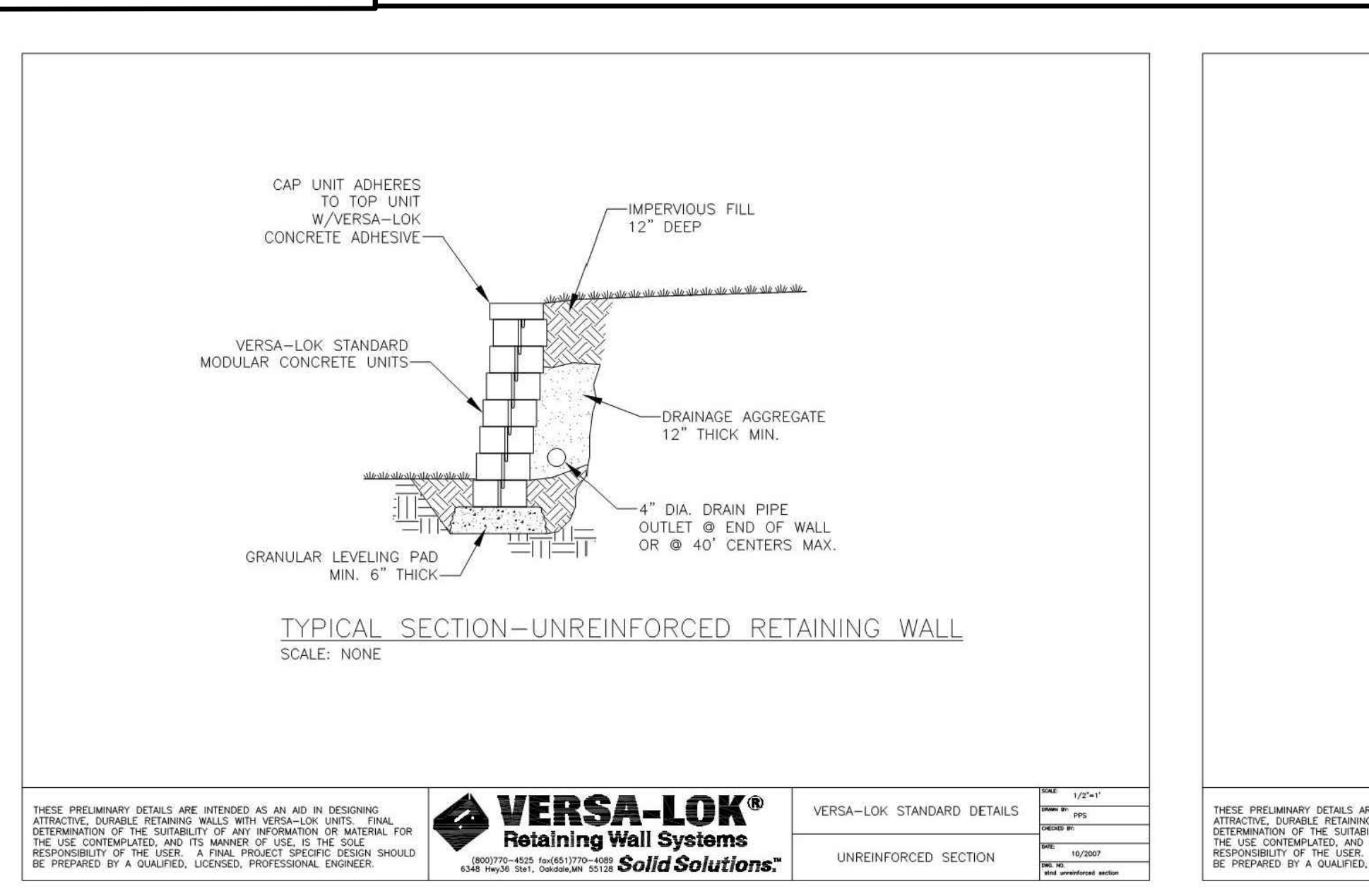
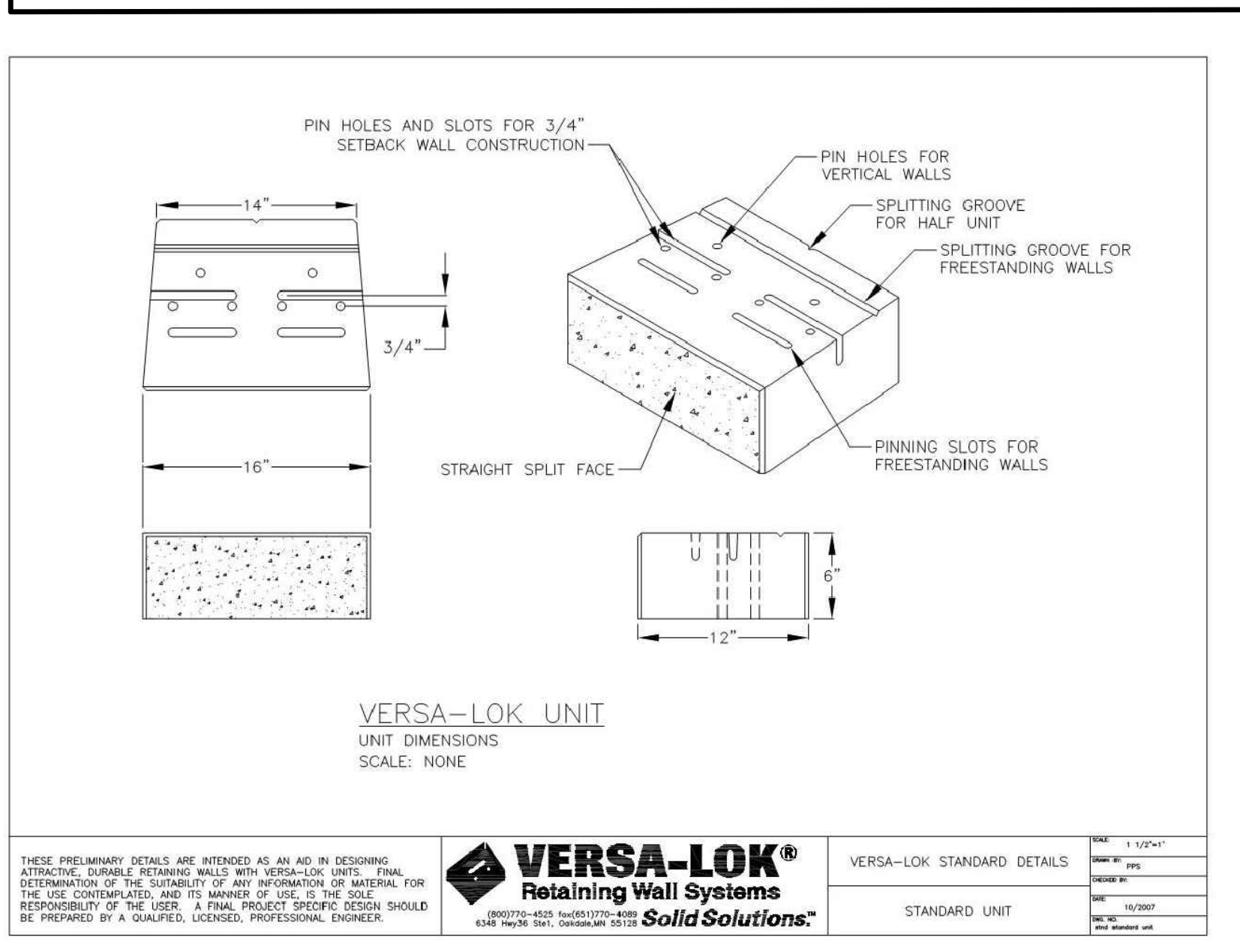
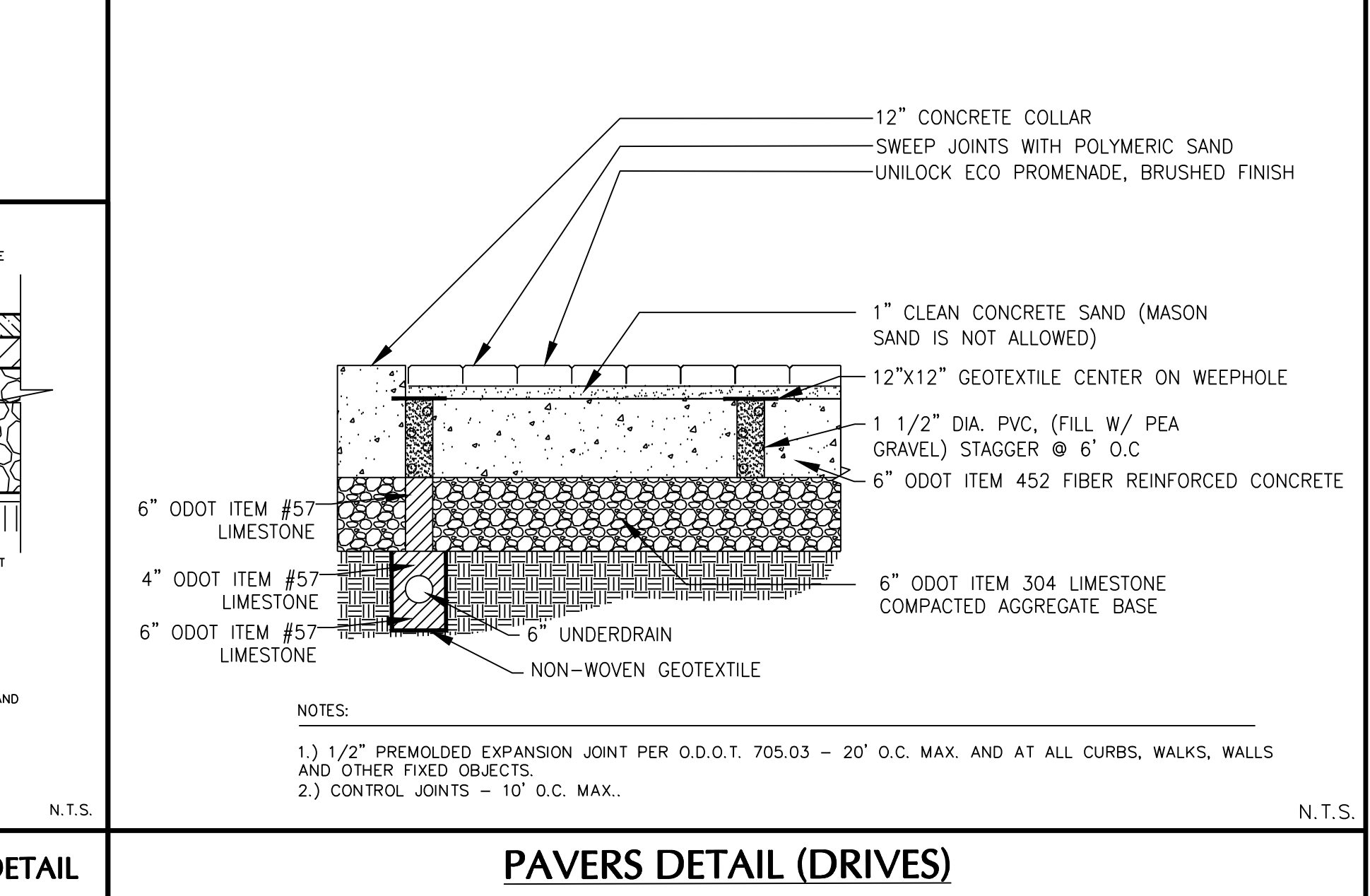
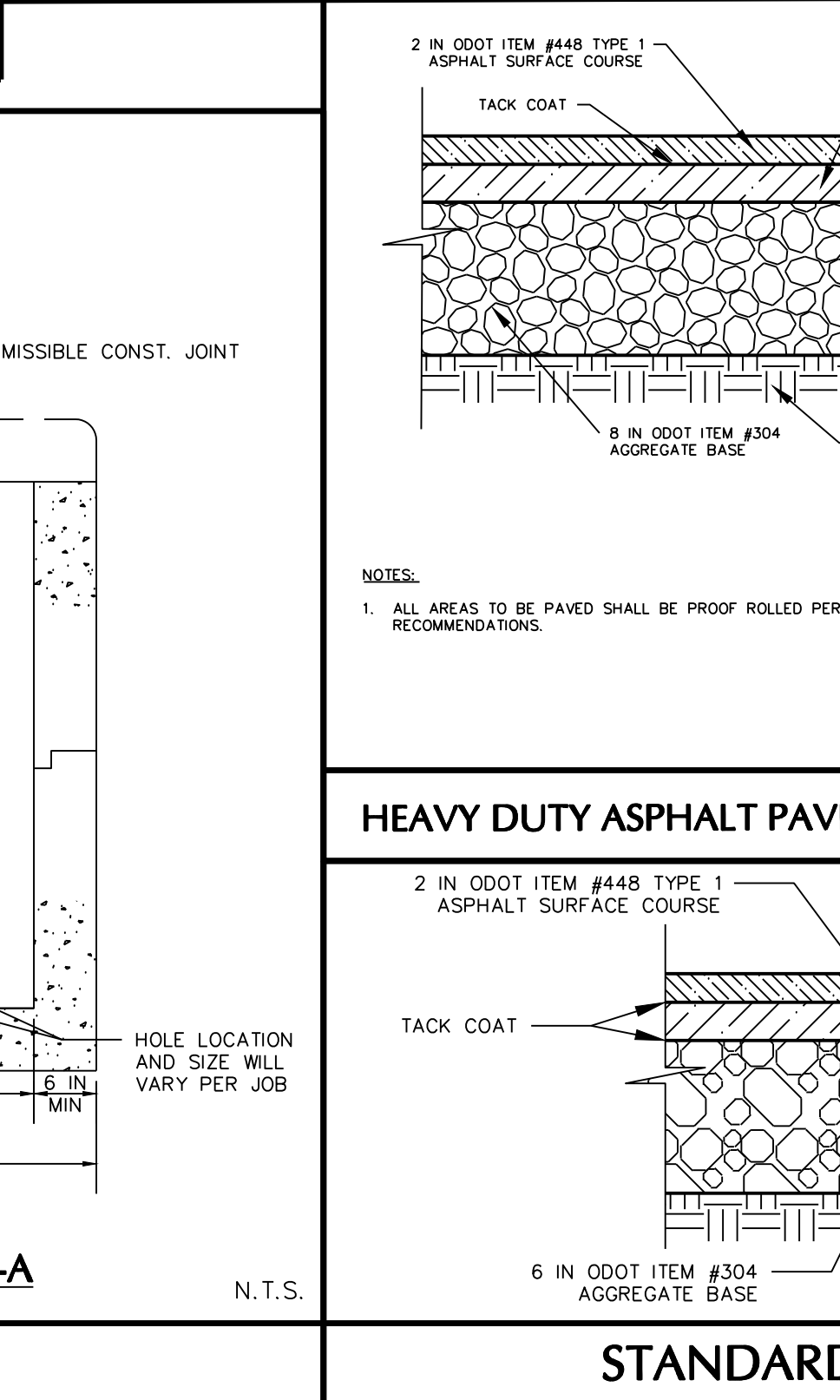
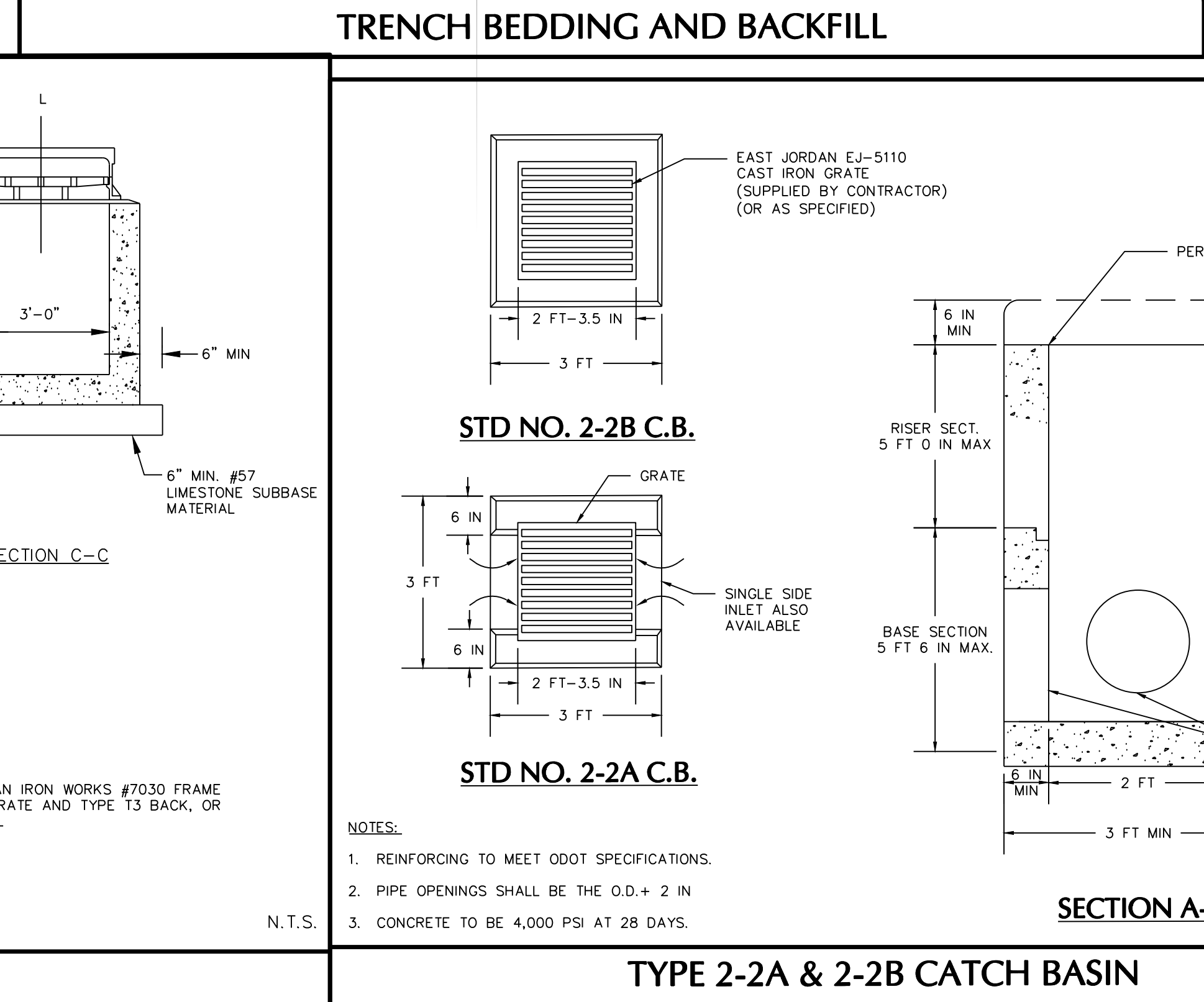
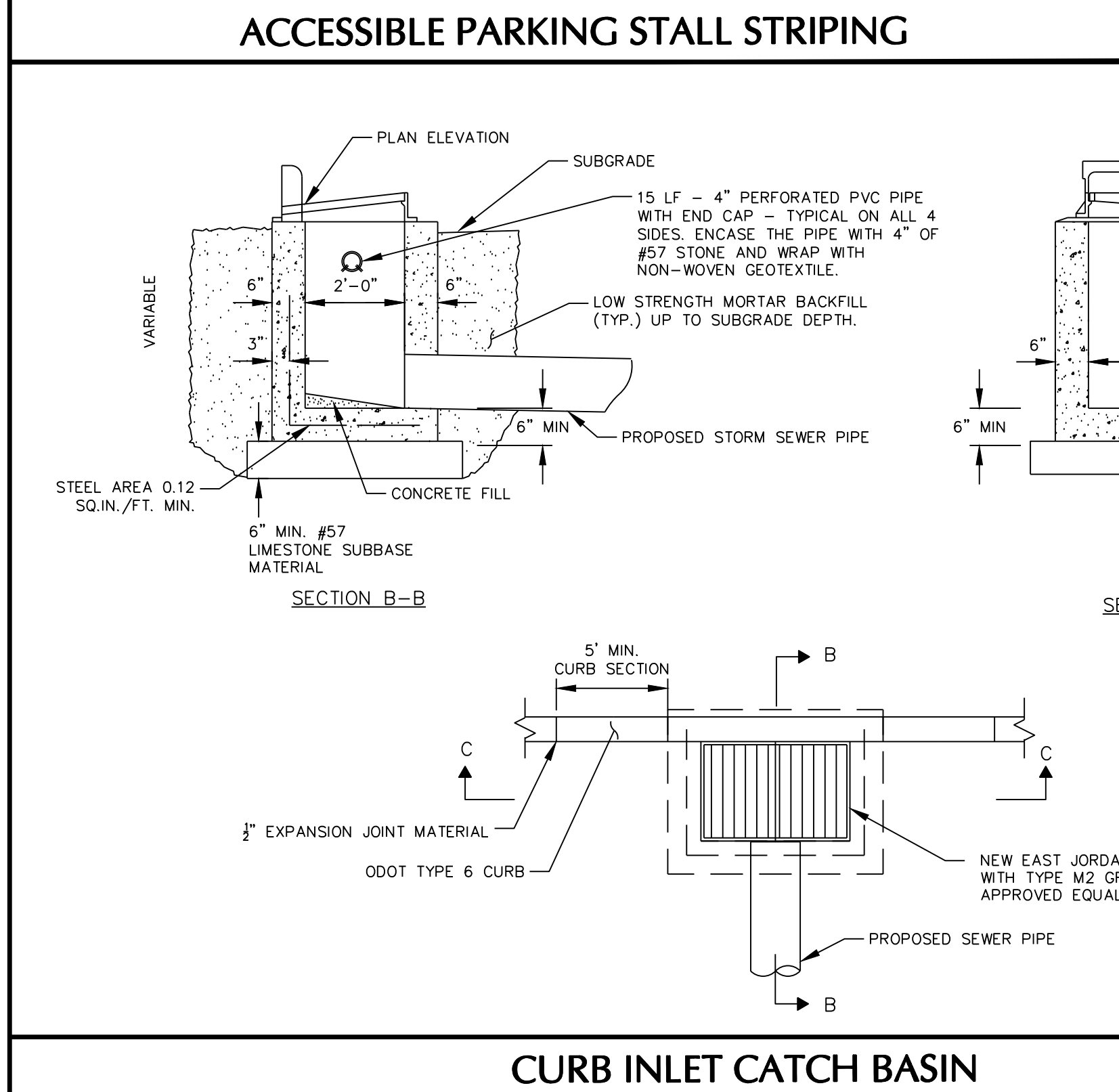
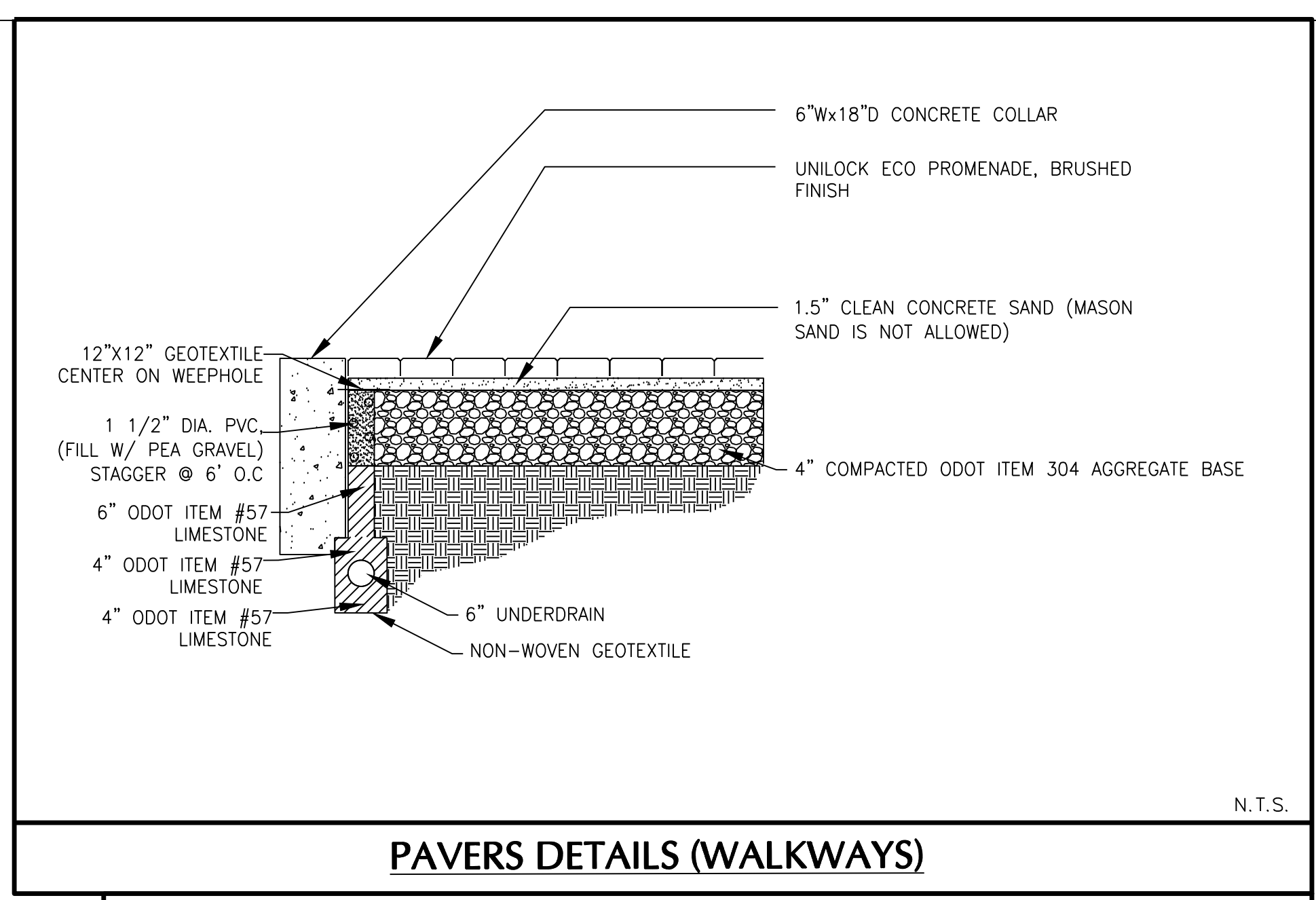
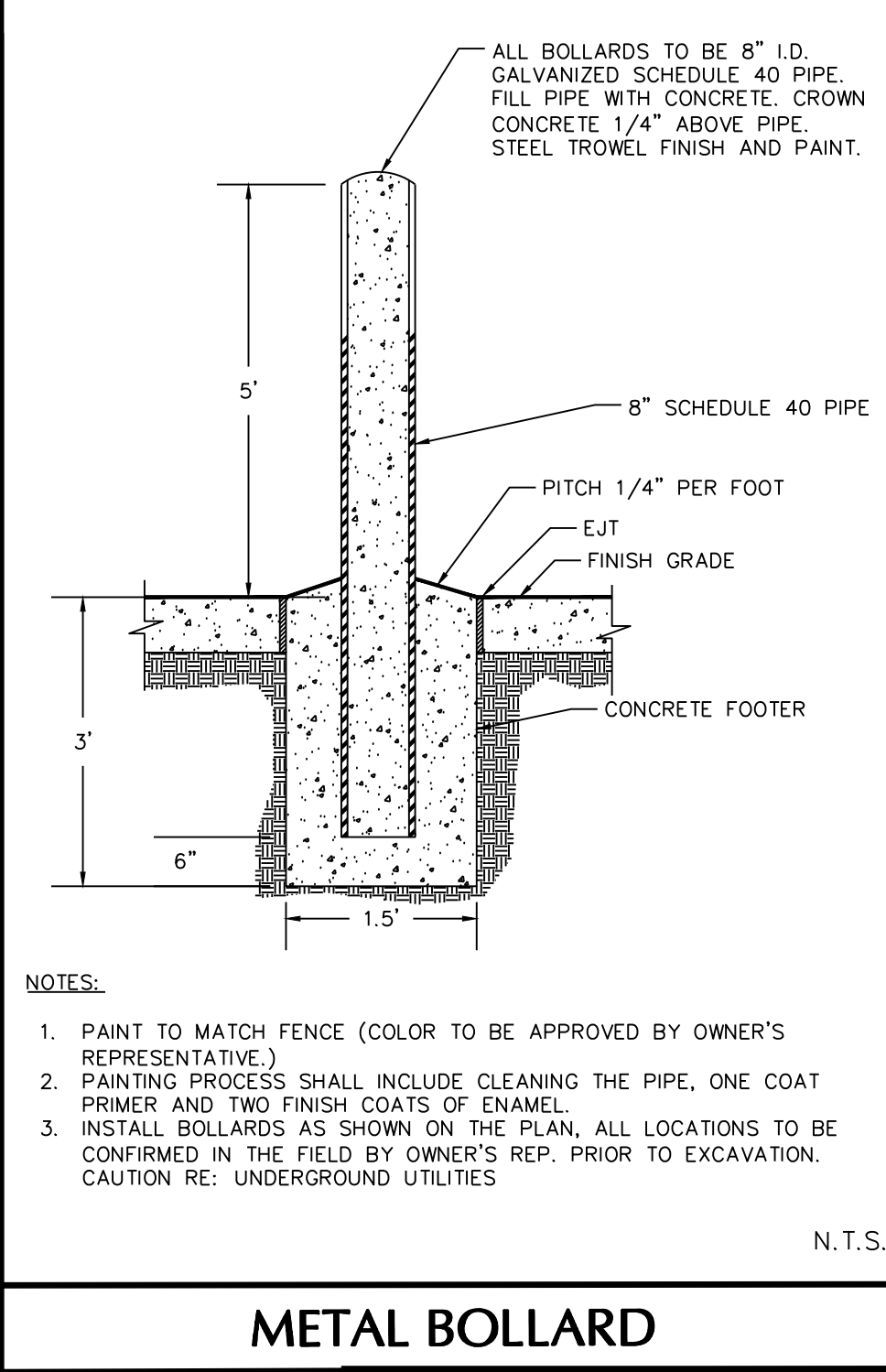
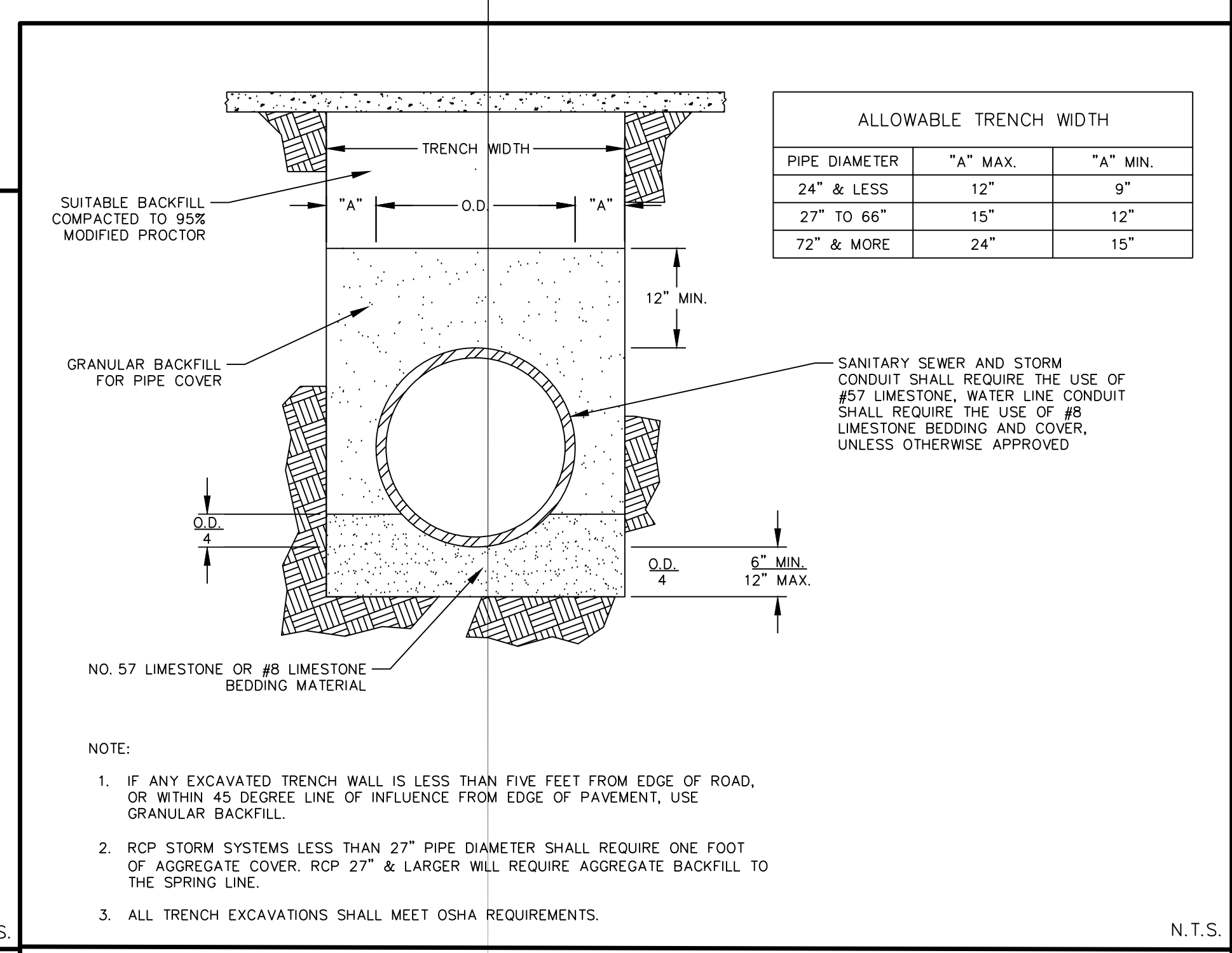
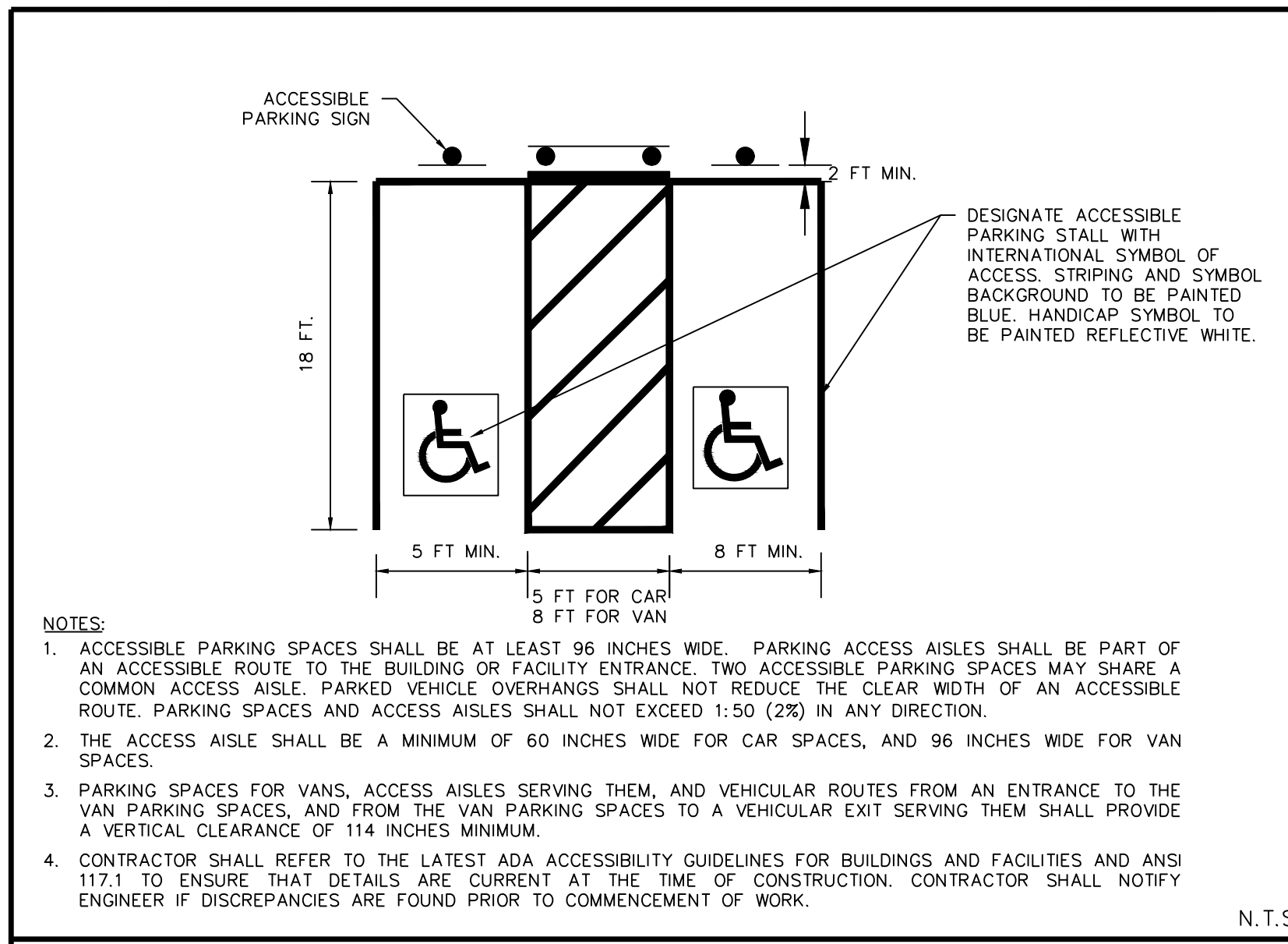
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DETAILS

SHEET NUMBER:

CS501



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VERSA-LOK STANDARD DETAILS
 STANDARD UNIT

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VERSA-LOK STANDARD DETAILS
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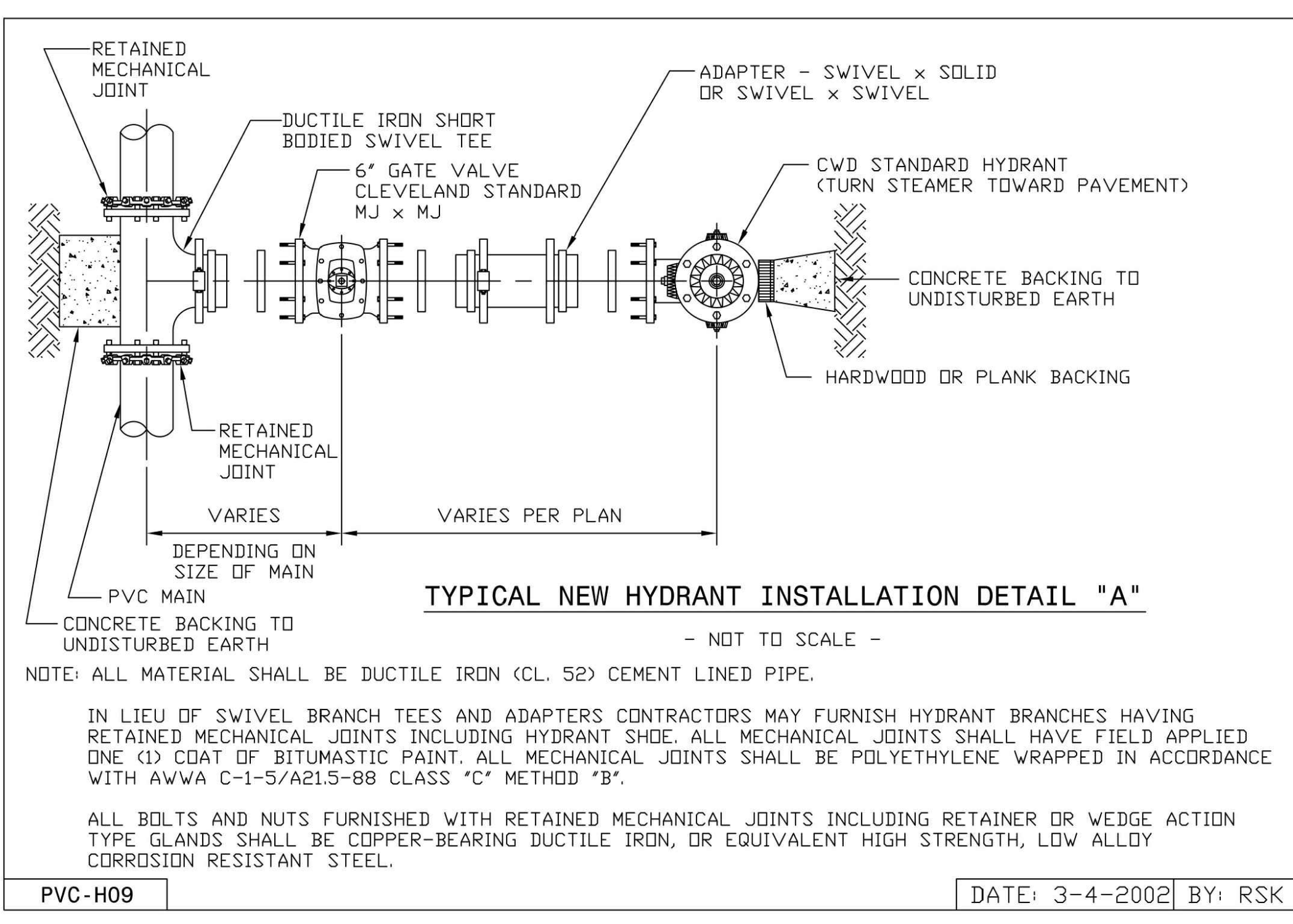
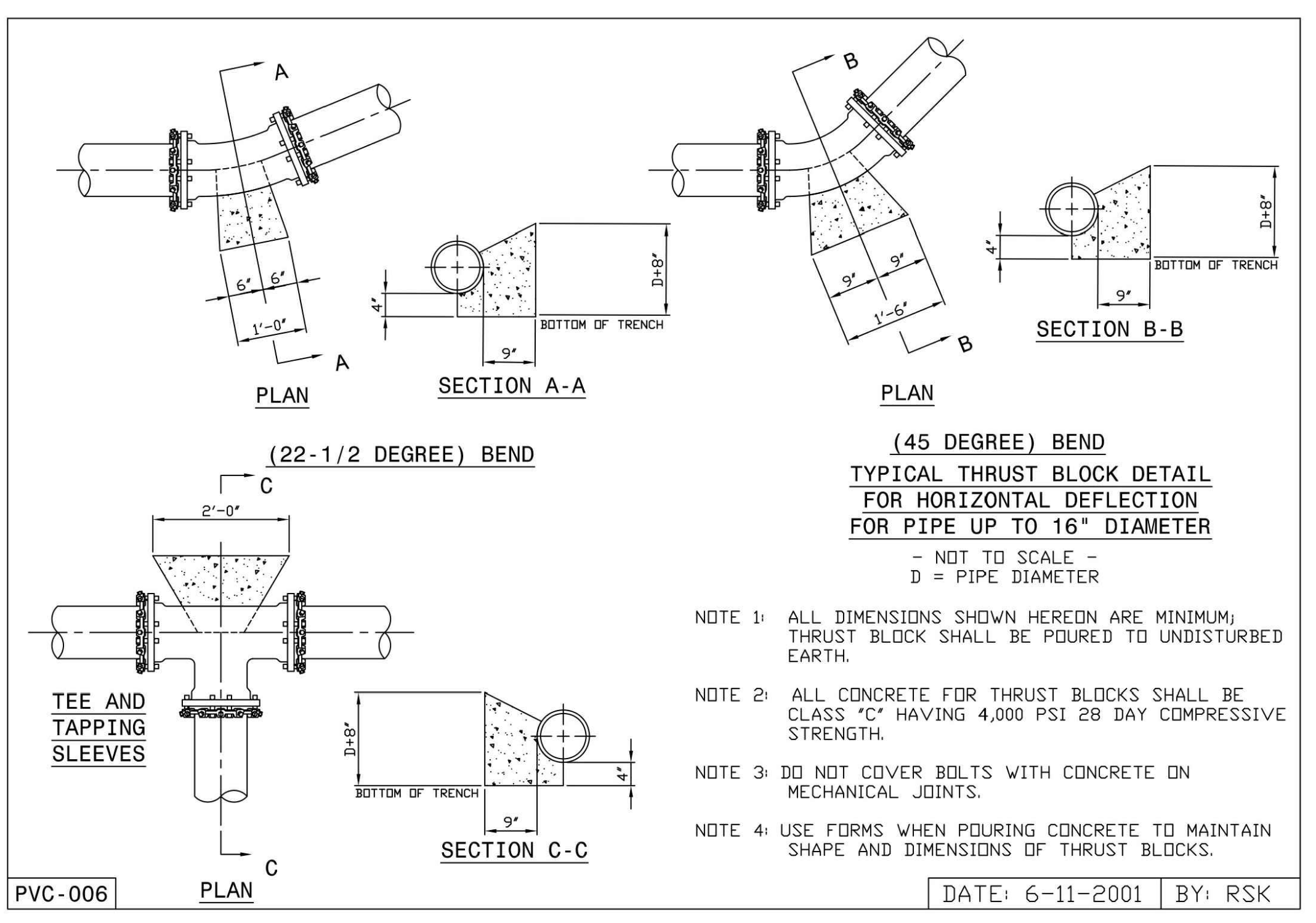
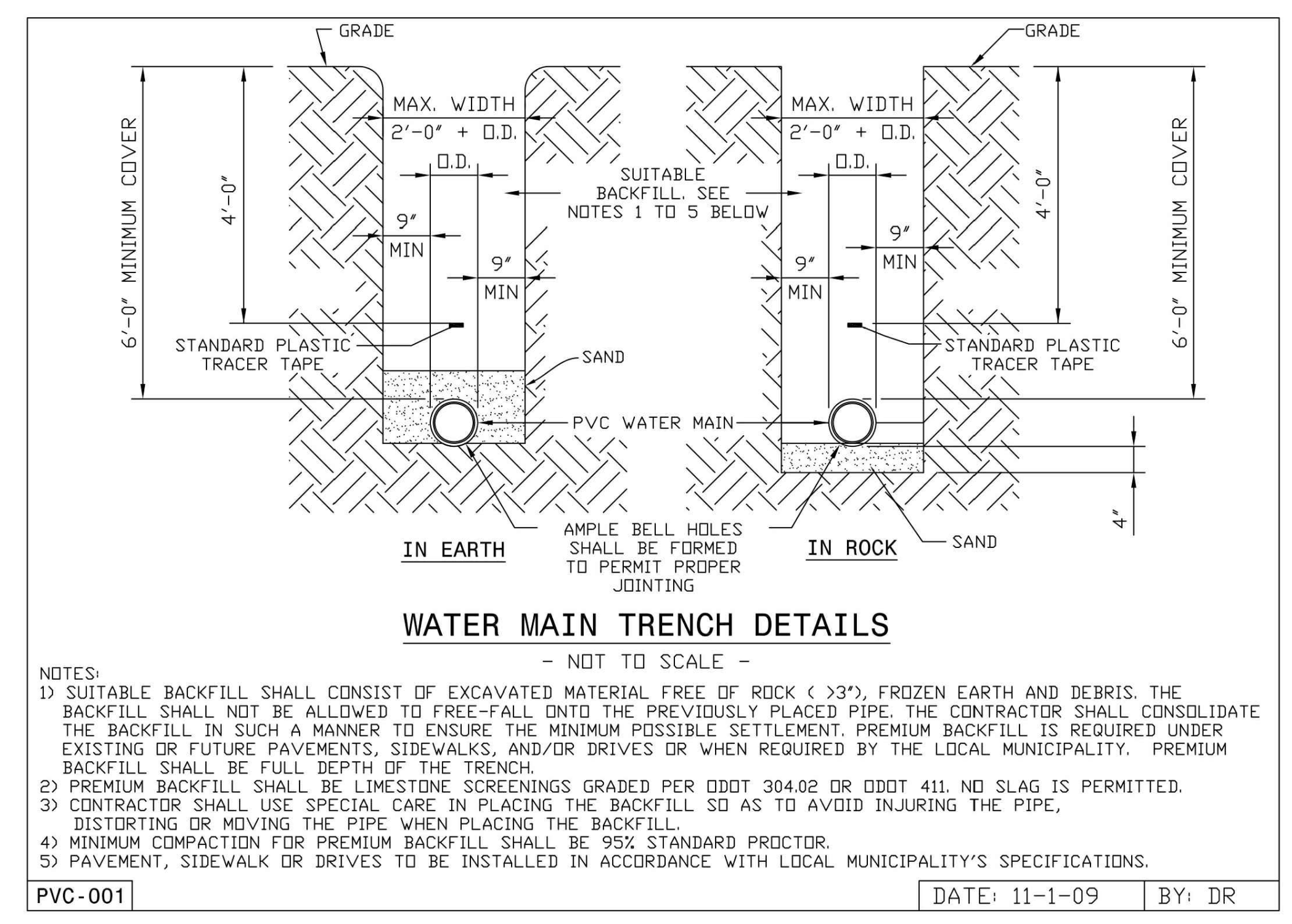
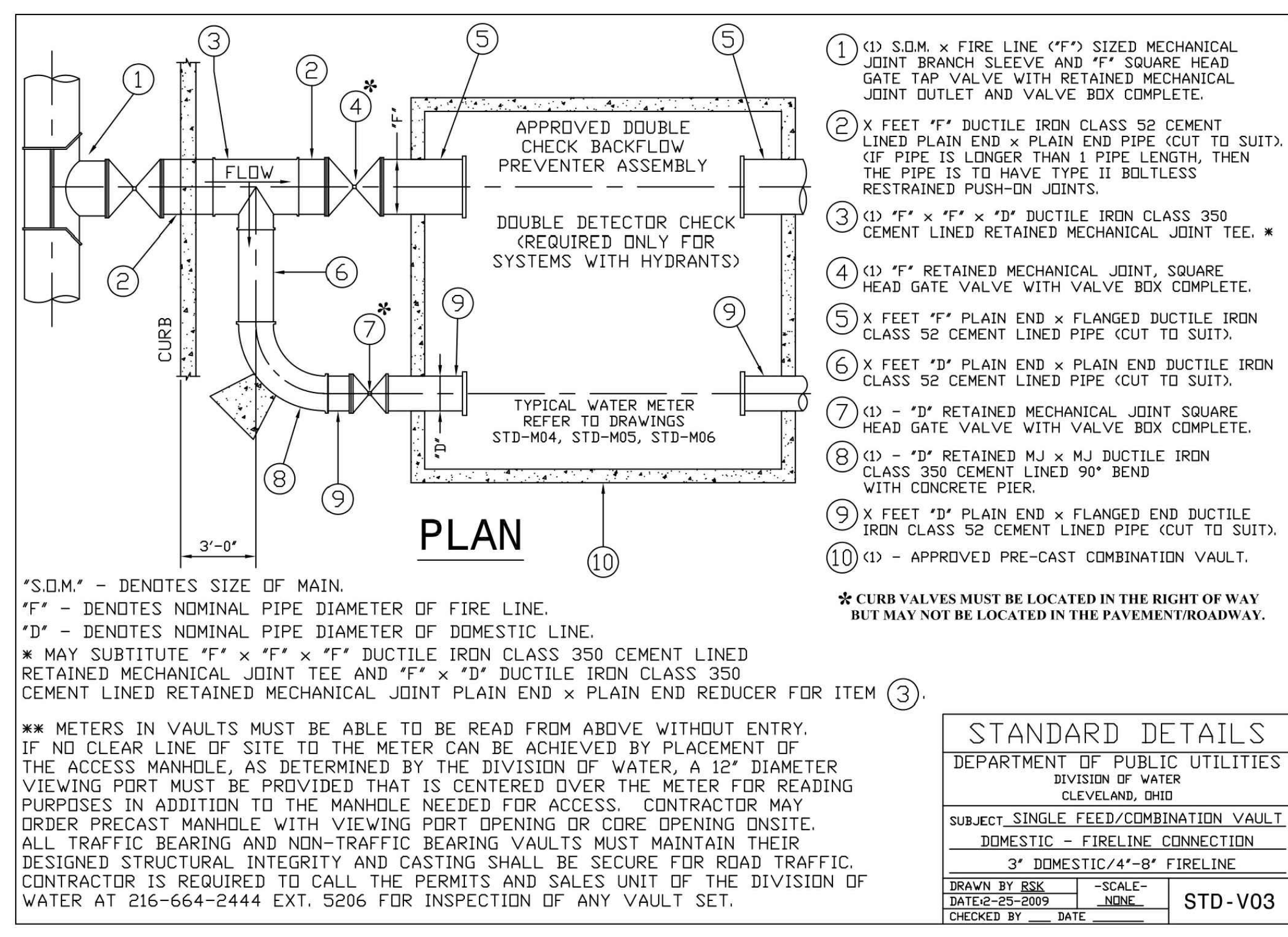
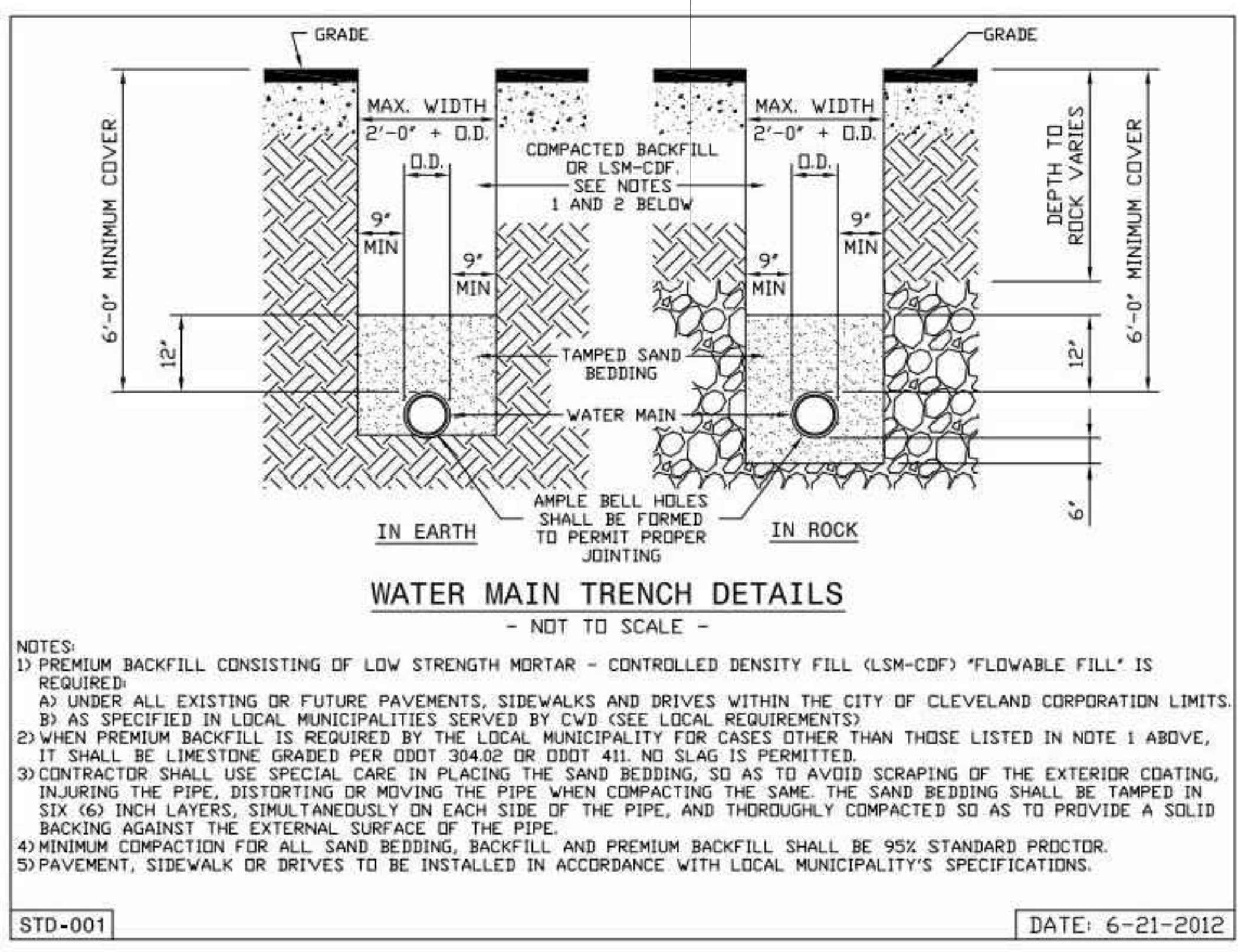
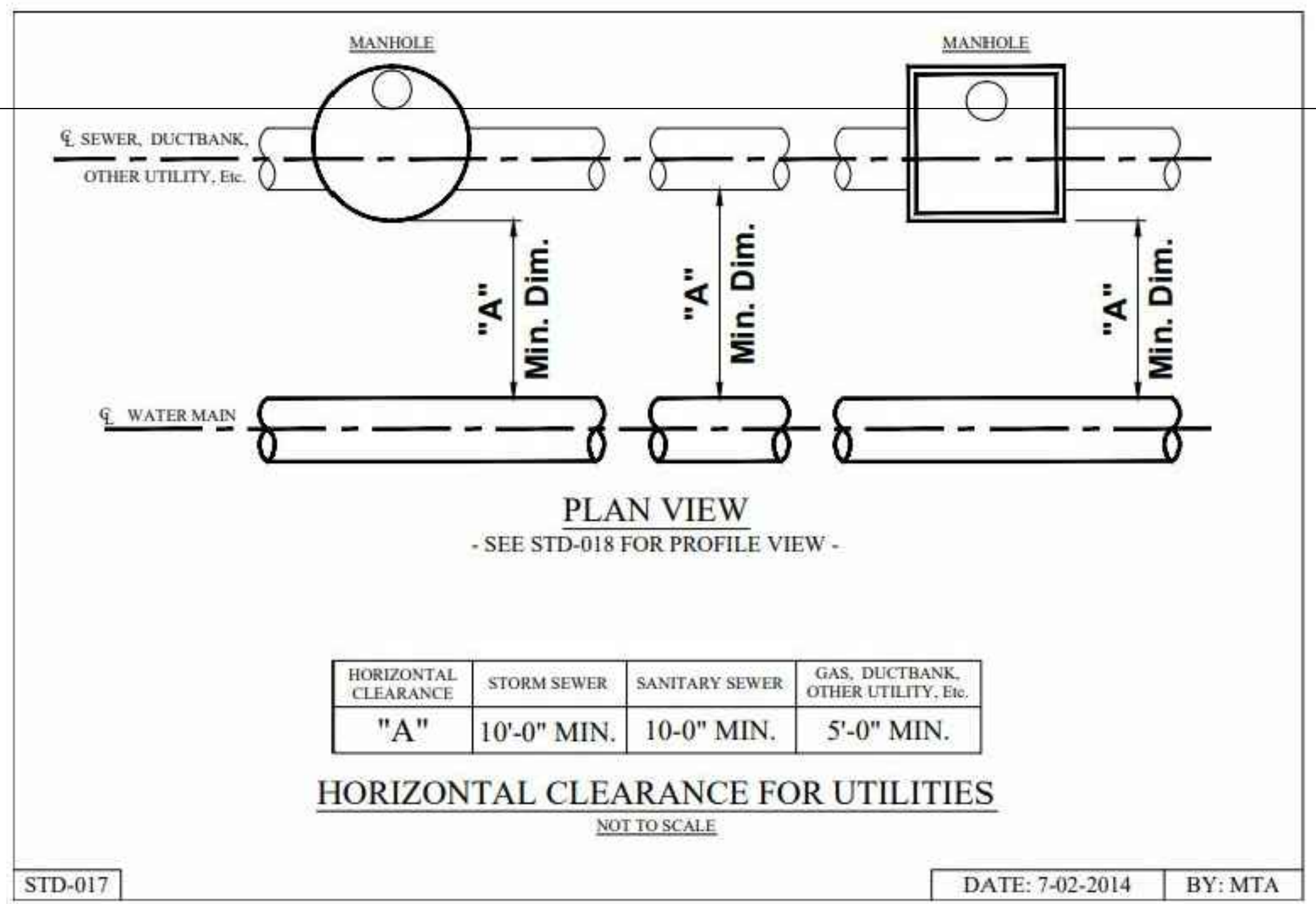
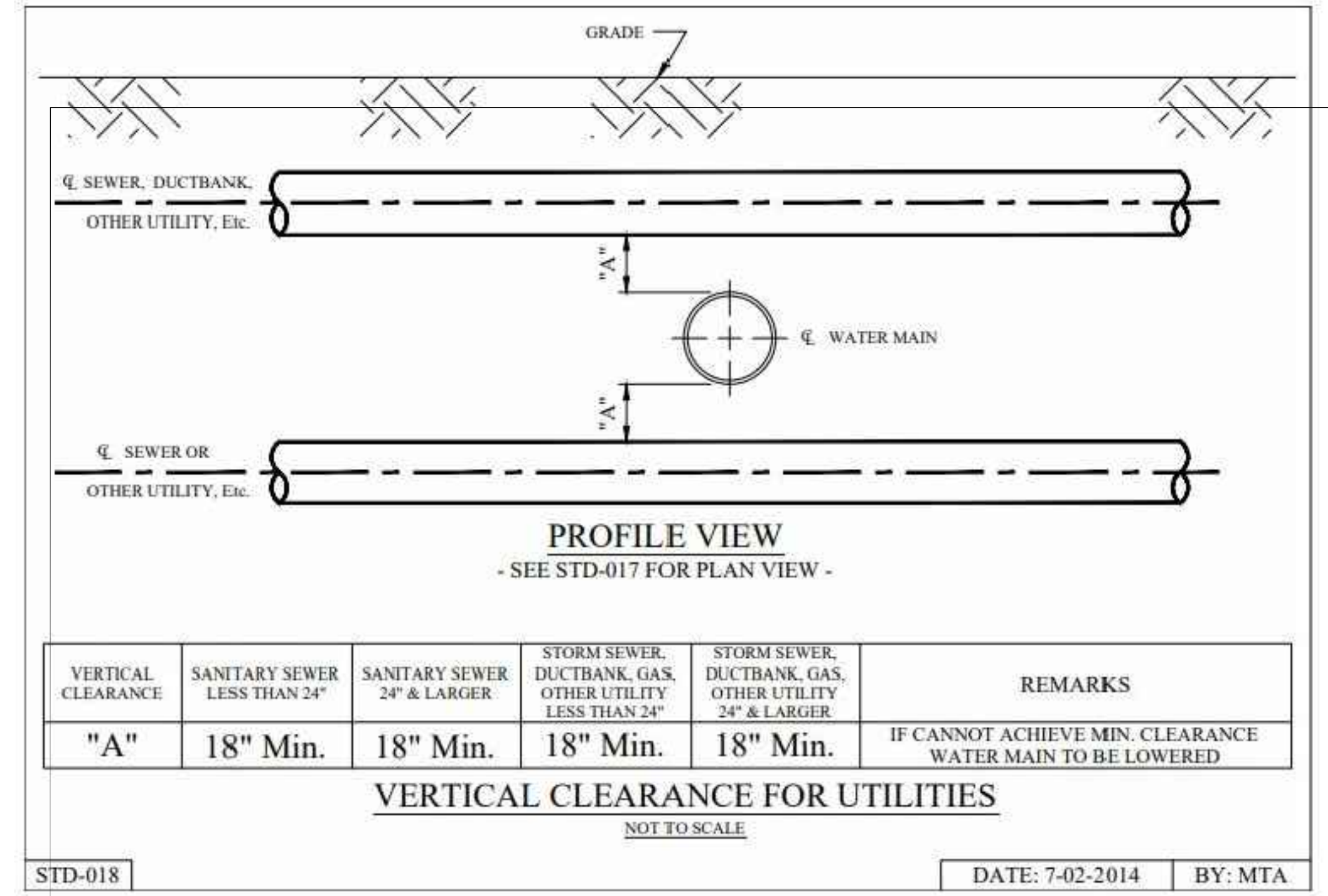
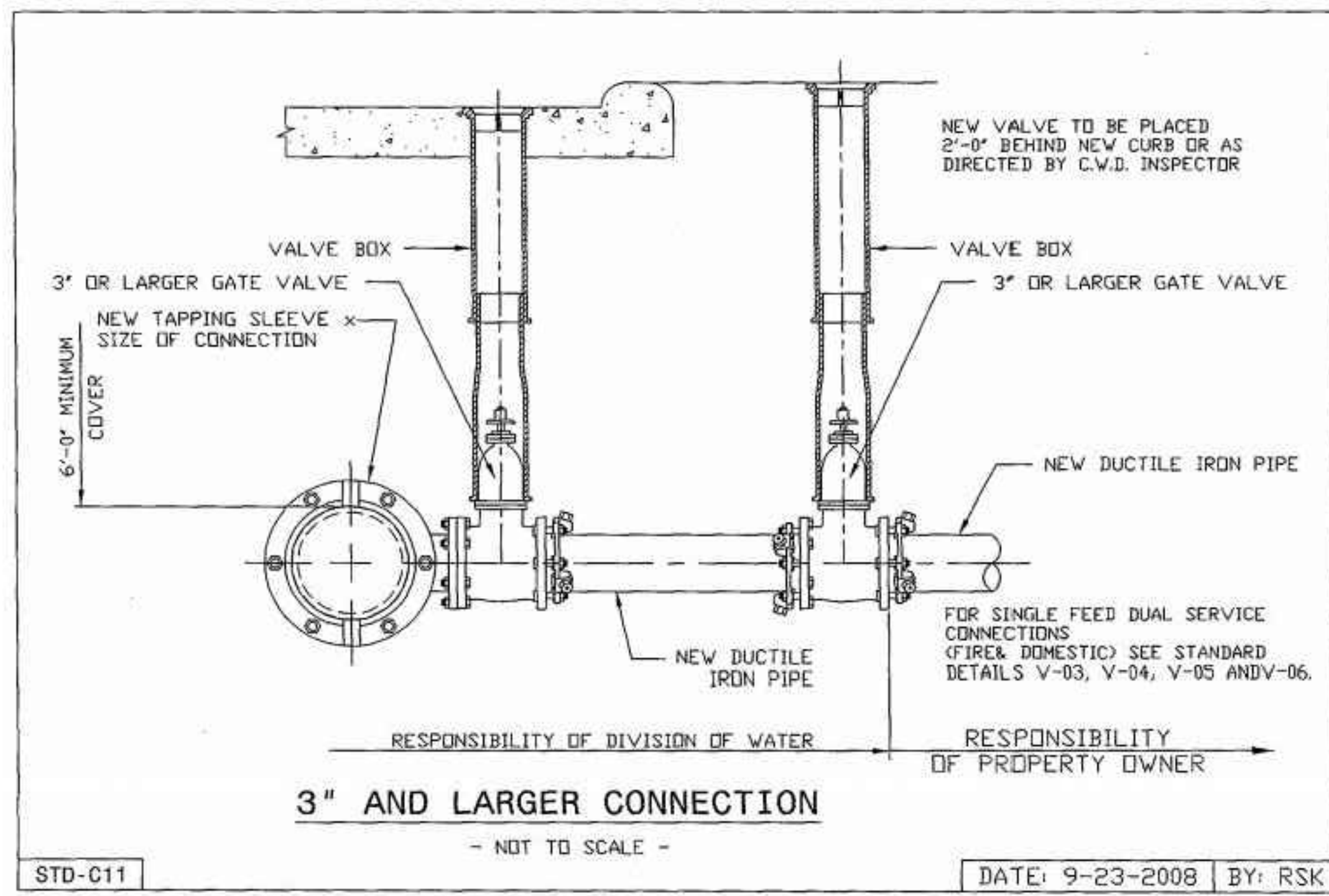
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 Retaining Wall Systems
 Solid Solutions®

VERSA-LOK STANDARD DETAILS
 PIN

PROPOSED CORE AND SHELL BUILDING:
Convergent East
 2 Equity Way
 Westlake, OH 44145

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DETAILS
 SHEET NUMBER:
CS503



PROPOSED CORE AND SHELL BUILDING:

Convergent East

2 Equity Way
Westlake, OH 44145

JOB NUMBER: 180393.00

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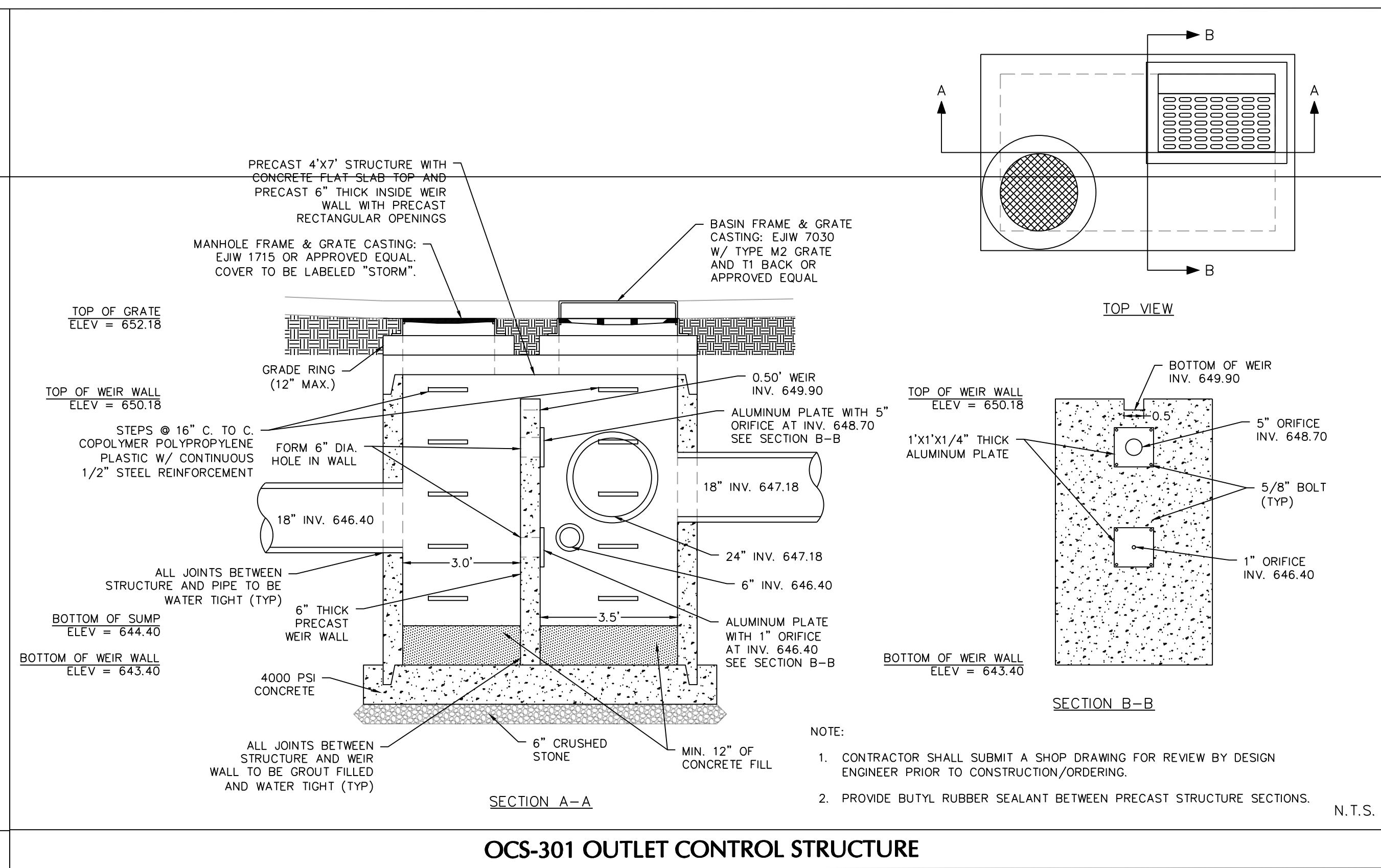
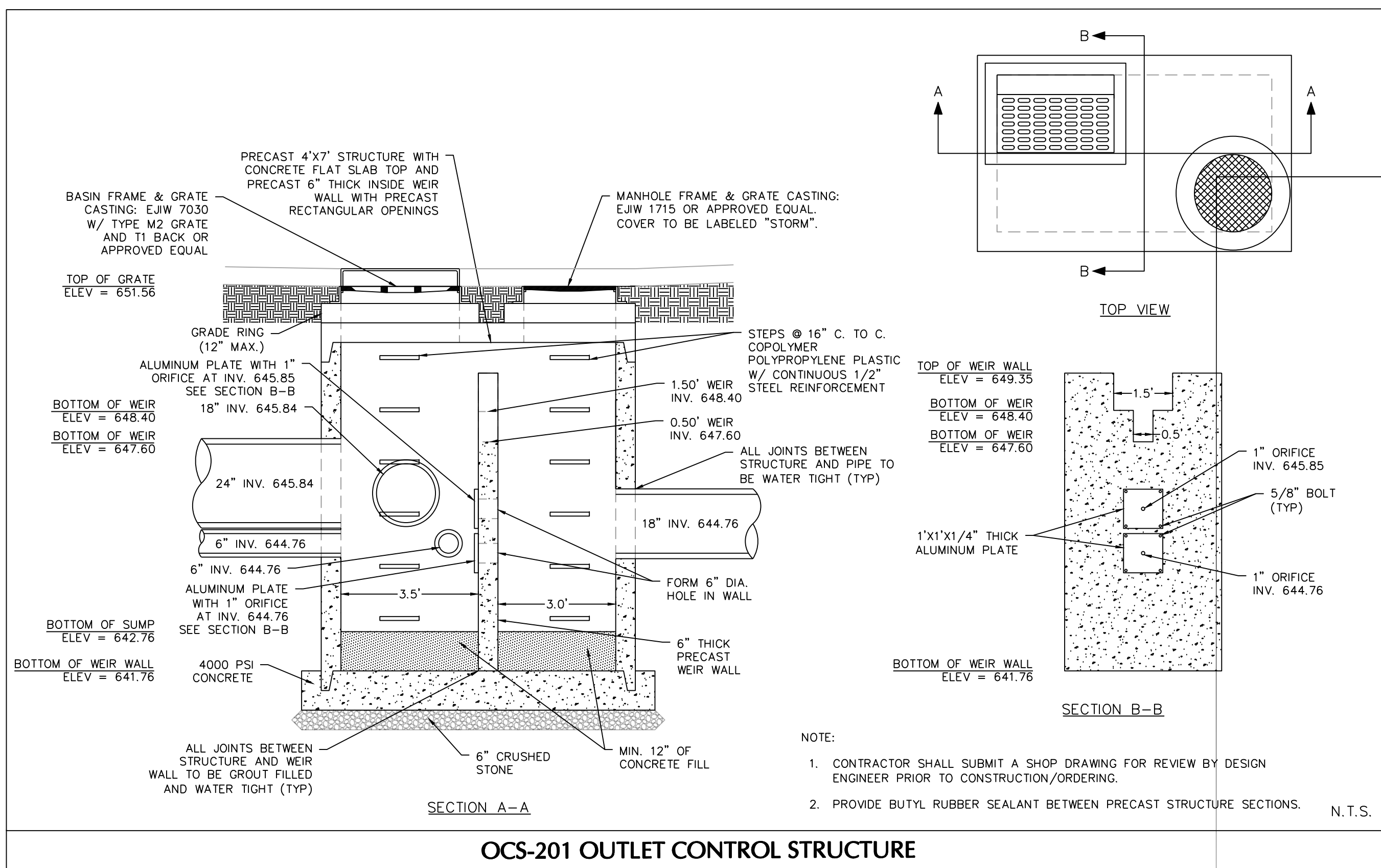
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CLEVELAND WATER DETAILS

SHEET NUMBER:

CS504



PROJECT INFORMATION	
ENGINEER	MICHAEL COOK
PRODUCT	218-502-6001
MANAGER	MICHAEL COOK@ADS-PIPE.COM
ADS SALES REP	MATTHEW MACE
	330-760-7991
	MATTHEW.MACE@ADS-PIPE.COM
PROJECT NO.	2511180



EQUITY TRUST CONVERGENT EAST WESTLAKE - OH

SC-740 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-740.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2419-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBERS ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPIDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSERVATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCE.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) TRUCKS WITH AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STANDING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ANCH SHAPE DURING INSTALLATION, THE ANCH SHAPE SHALL BE GREATER THAN OR EQUAL TO 1/8" FOR DEAD LOAD AND 1/4" FOR LIVE LOAD. THE ANCH SHAPE SHALL BE GREATER THAN OR EQUAL TO 1/8" FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

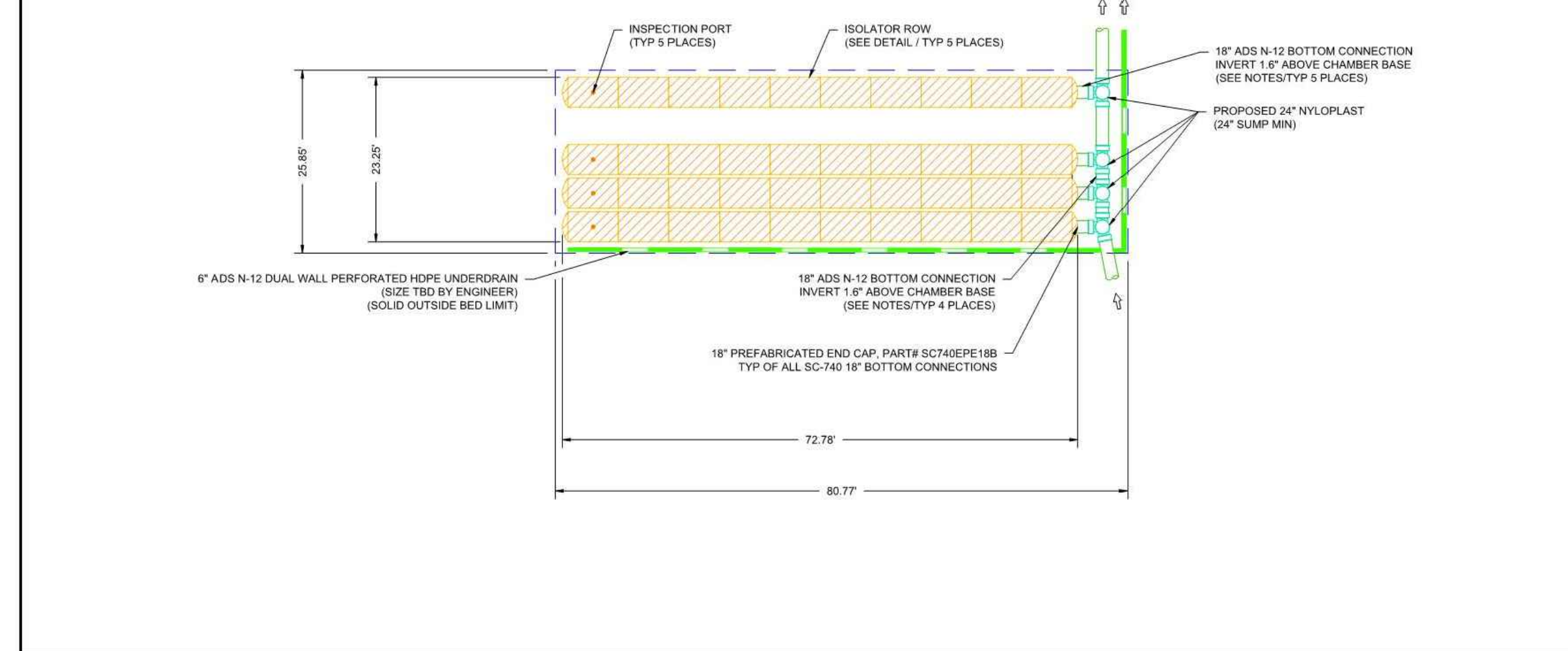
IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-740 CHAMBER

- STORMTECH SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
 - STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310SC-740DC-740 CONSTRUCTION GUIDE".
 - CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS BACKFILL METHODS:
 - STONE SHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL BE ROWS ARE BUILT USING AN EXCAVATOR FOR THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
 - THE FOUNDATION STONE SHALL BE LEVELLED AND COMPACTED PRIOR TO PLACING CHAMBERS.
 - JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
 - MAINTAIN MINIMUM 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
 - EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4" 2" (20-50 mm).
 - THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
 - ADS RECOMMENDS THE USE OF "FLUXING/STORM CAT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.
- NOTES FOR CONSTRUCTION EQUIPMENT**
- STORMTECH SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310SC-740DC-740 CONSTRUCTION GUIDE".
 - THE USE OF CONSTRUCTION EQUIPMENT OVER SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS TO ALLOW ON/BE CHAMBERS.
 - NO RUBBER TIRE LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNLESS PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310SC-740DC-740 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310SC-740DC-740 CONSTRUCTION GUIDE".
 - FILL 3" (90 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.
- USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.
- CONTACT STORMTECH AT 1-888-892-2894 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

PROPOSED LAYOUT - SYSTEM A - SOUTH	
40	STORMTECH SC-740 CHAMBERS
8	STORMTECH SC-740 END CAPS
6	STONE ABOVE (ft)
6	STONE BELOW (ft)
40	% STONE VOID
4028	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
2088	SYSTEM AREA (ft ²)
113	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS - SYSTEM A - SOUTH	
656.34	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT UNPAVED)
655.24	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
649.84	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
649.84	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
649.84	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
648.84	TOP OF STONE
648.84	TOP OF SC-740 CHAMBER
645.97	18" BOTTOM CONNECTION INVERT
645.97	18" ISOLATOR ROW CONNECTION INVERT
645.84	BOTTOM OF SC-740 CHAMBER
645.34	UNDERDRAIN INVERT
645.34	BOTTOM OF STONE

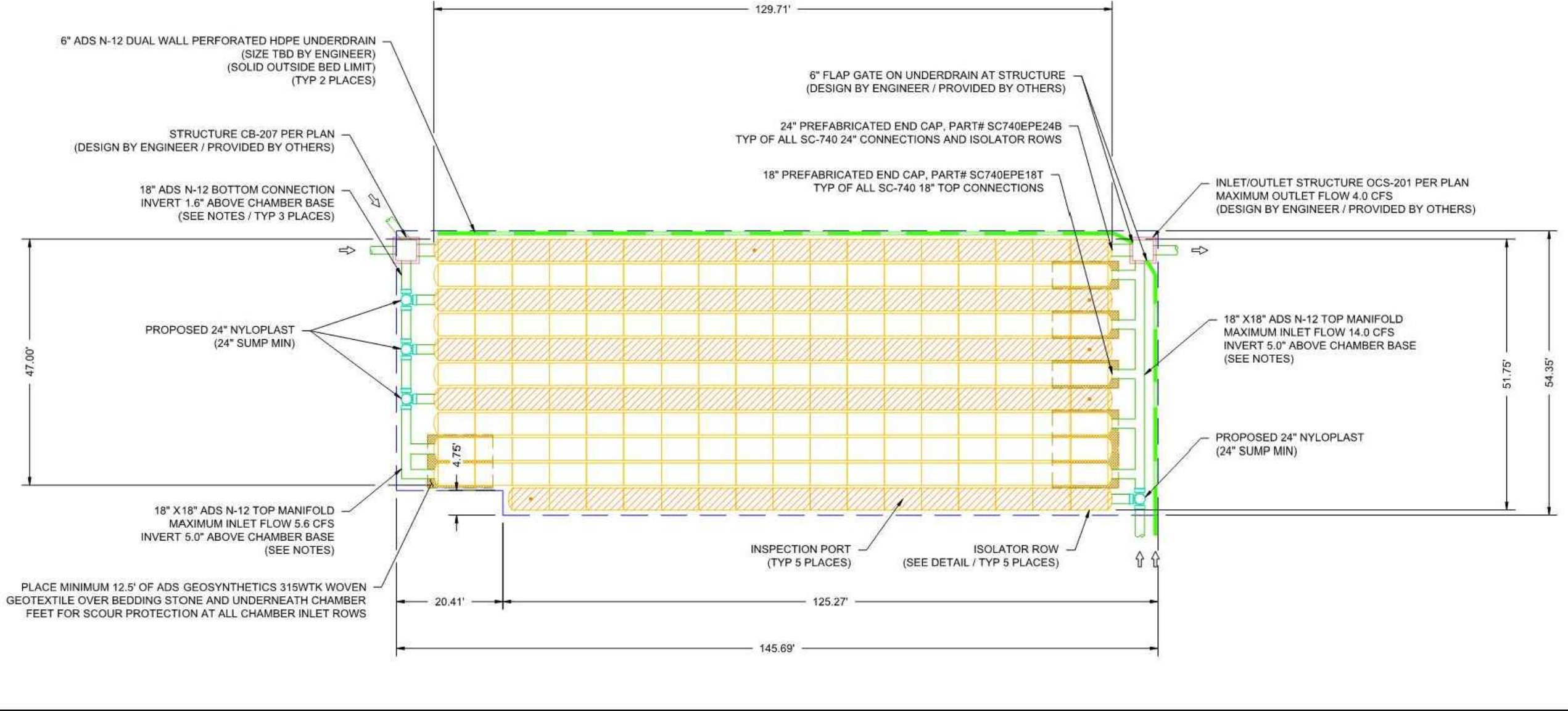
- NOTES**
- MANHOLE SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH SHEET #7 FOR MANHOLE SIZING GUIDANCE.
 - DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANHOLE COMPONENTS IN THE FIELD.
 - THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
 - THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE IN-SITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.



PROPOSED LAYOUT - SYSTEM A - NORTH	
19	STORMTECH SC-740 CHAMBERS
22	STORMTECH SC-740 END CAPS
12	STONE ABOVE (ft)
6	STONE BELOW (ft)
6	% STONE VOID
1791	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
763	SYSTEM AREA (ft ²)
400	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS - SYSTEM A - NORTH	
656.34	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT UNPAVED)
655.24	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
649.84	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
649.84	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
649.84	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
648.34	TOP OF STONE
648.34	TOP OF SC-740 CHAMBER
648.34	TOP MANHOLE INVERT
645.97	18" BOTTOM CONNECTION INVERT
645.97	24" ISOLATOR ROW CONNECTION INVERT
645.84	BOTTOM OF SC-740 CHAMBER
645.34	UNDERDRAIN INVERT
645.34	BOTTOM OF STONE

- NOTES**
- MANHOLE SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH SHEET #7 FOR MANHOLE SIZING GUIDANCE.
 - DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANHOLE COMPONENTS IN THE FIELD.
 - THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
 - THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE IN-SITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.



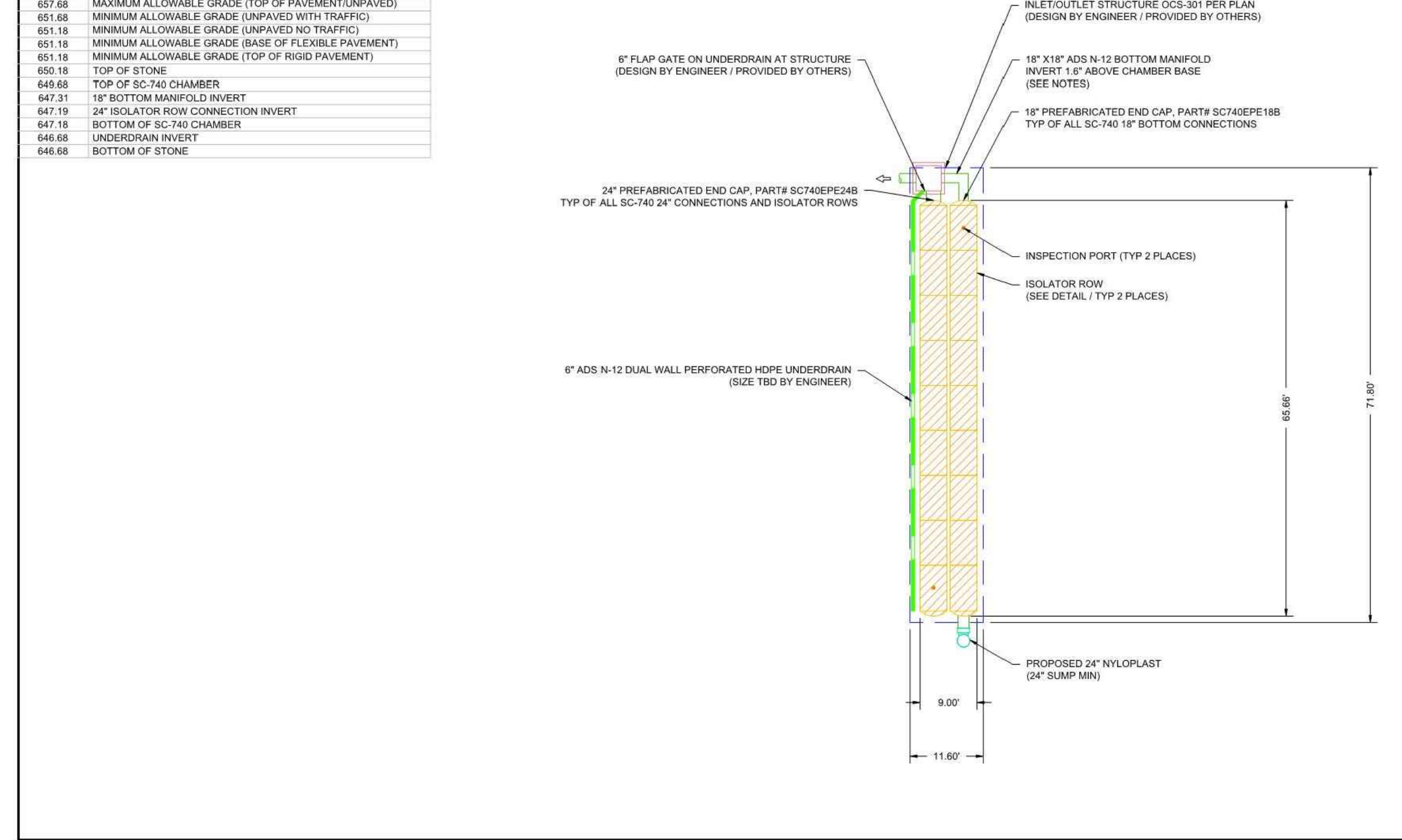
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PROJECT #:	2511180

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PROPOSED LAYOUT - SYSTEM B	
15	STORMTECH SC-740 CHAMBERS
4	STORMTECH SC-740 END CAPS
6	STONE ABOVE (ft)
6	STONE BELOW (ft)
40	% STONE VOID
1662	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)
833	SYSTEM AREA (ft ²)
197	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS - SYSTEM B	
657.68	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT UNPAVED)
655.68	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
651.18	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
651.18	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
651.18	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
650.18	TOP OF STONE
649.68	TOP OF SC-740 CHAMBER
647.21	18" BOTTOM MANHOLE INVERT
647.19	24" ISOLATOR ROW CONNECTION INVERT
647.18	BOTTOM OF SC-740 CHAMBER
646.68	UNDERDRAIN INVERT
646.68	BOTTOM OF STONE

- NOTES**
- MANHOLE SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH SHEET #7 FOR MANHOLE SIZING GUIDANCE.
 - DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANHOLE COMPONENTS IN THE FIELD.
 - THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
 - THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE IN-SITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.



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WESTLAKE - OH
DATE: 12/18/18
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ADS TECHNICAL SALES
HILLIARD, OH 43026
2511180

ADS
ADVANCED DRAINAGE SYSTEMS, INC.
HILLIARD, OH 43026

2 OF 7

EQUITY TRUST CONVERGENT EAST
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DATE: 12/18/18
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PROJECT #: 2511180

ADS TECHNICAL SALES
HILLIARD, OH 43026
2511180

ADS
ADVANCED DRAINAGE SYSTEMS, INC.
HILLIARD, OH 43026

4 OF 7

PROPOSED CORE AND SHELL BUILDING:

Convergent East

2 Equity Way
Westlake, OH 44145

JOB NUMBER: 180393.00

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STORM SYSTEM DETAILS

SHEET NUMBER:
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ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

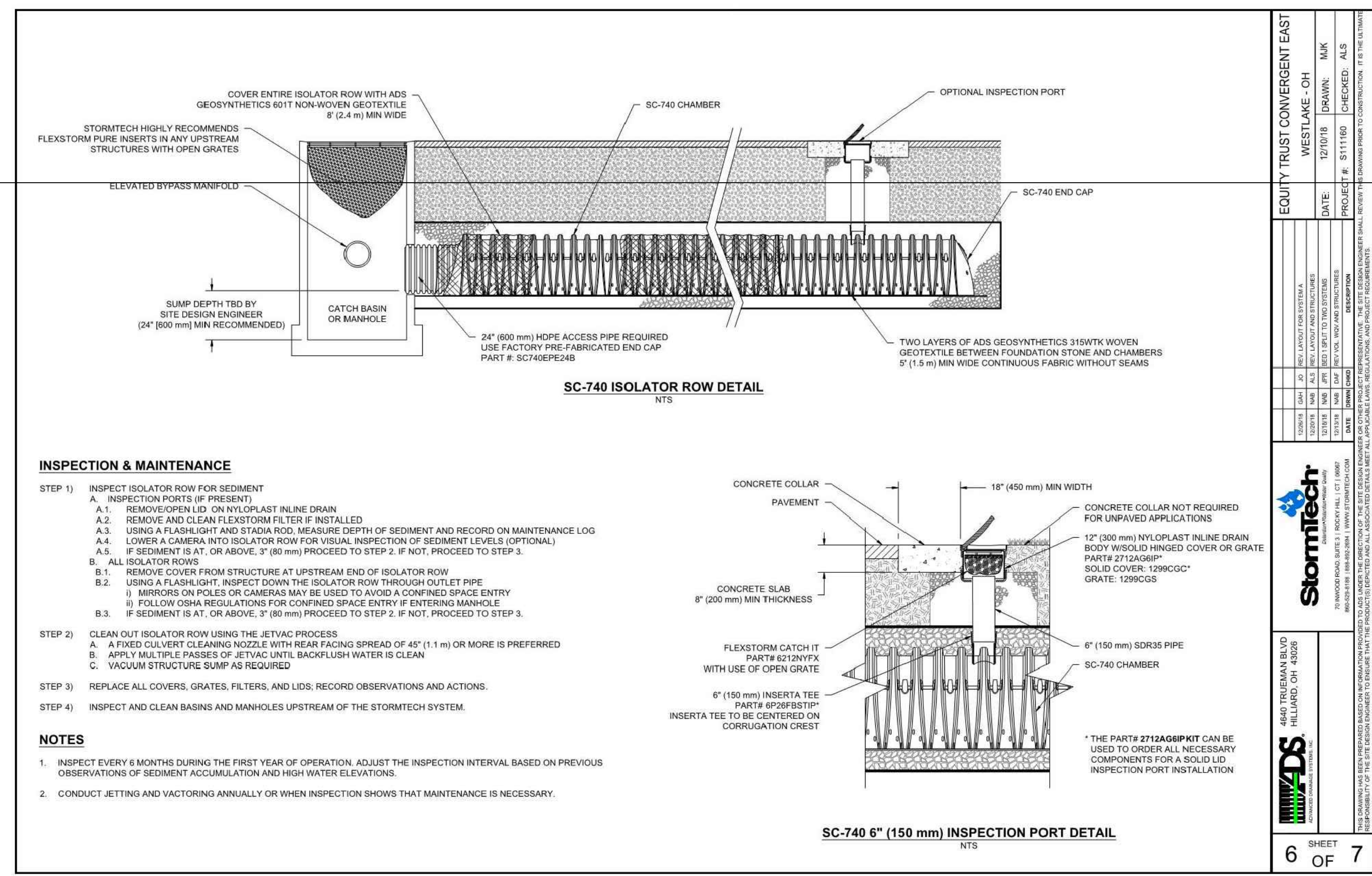
MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT. CHECK PLANS FOR PAVEMENT GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. FLEXIBLE INSTALLATIONS MAY HAVE STRONG MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE PAVEMENT (STONE 'B' LAYER) TO 18" (457 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M45 ¹ A-1, A-2, A-3 OR AASHTO M41 ¹ 3, 3.97, 4, 4.67, 5, 5.6, 5.7, 6, 6.7, 7, 7.8, 8, 8.9, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 90% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 33,000 lbs (15 kN). DYNAMIC FORCE NOT TO EXCEED 30,000 lbs (13.4 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ¹ 3, 3.97, 4, 4.67, 5, 5.6, 5.7	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 ¹ 3, 3.97, 4, 4.67, 5, 5.6, 5.7	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{1,2}

PLEASE NOTE:
 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR, FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) MAX LIFTS USING TWO FULL COVERSAGES WITH A VIBRATORY COMPACTOR.
 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGN, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.

NOTES:
 1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2522 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2797 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
 4. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
 5. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
 6. ONCE LAYER 'C' IS PLACED, ANY SOLID MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

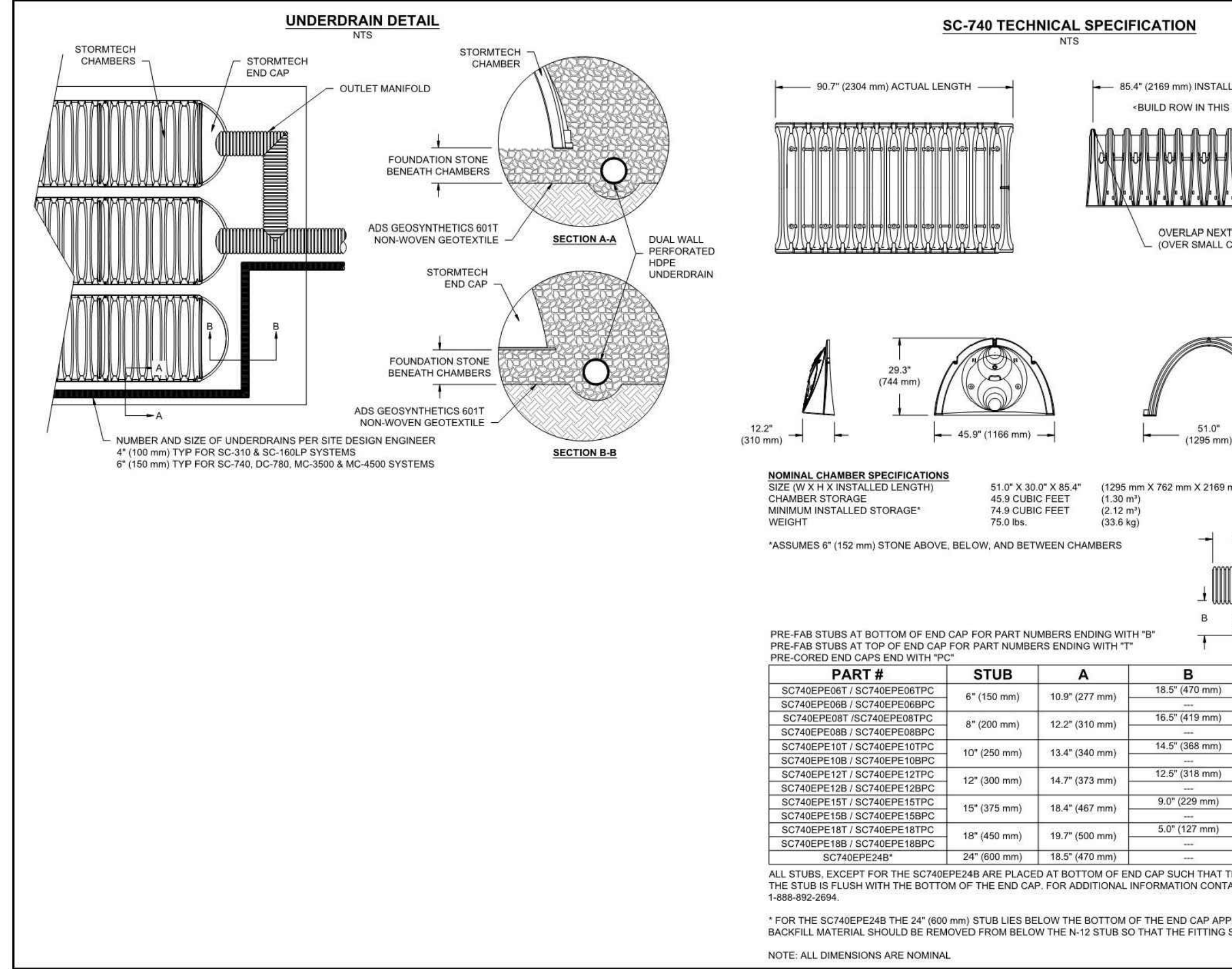
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 WESTLAKE, OH
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7 SHEET OF 7



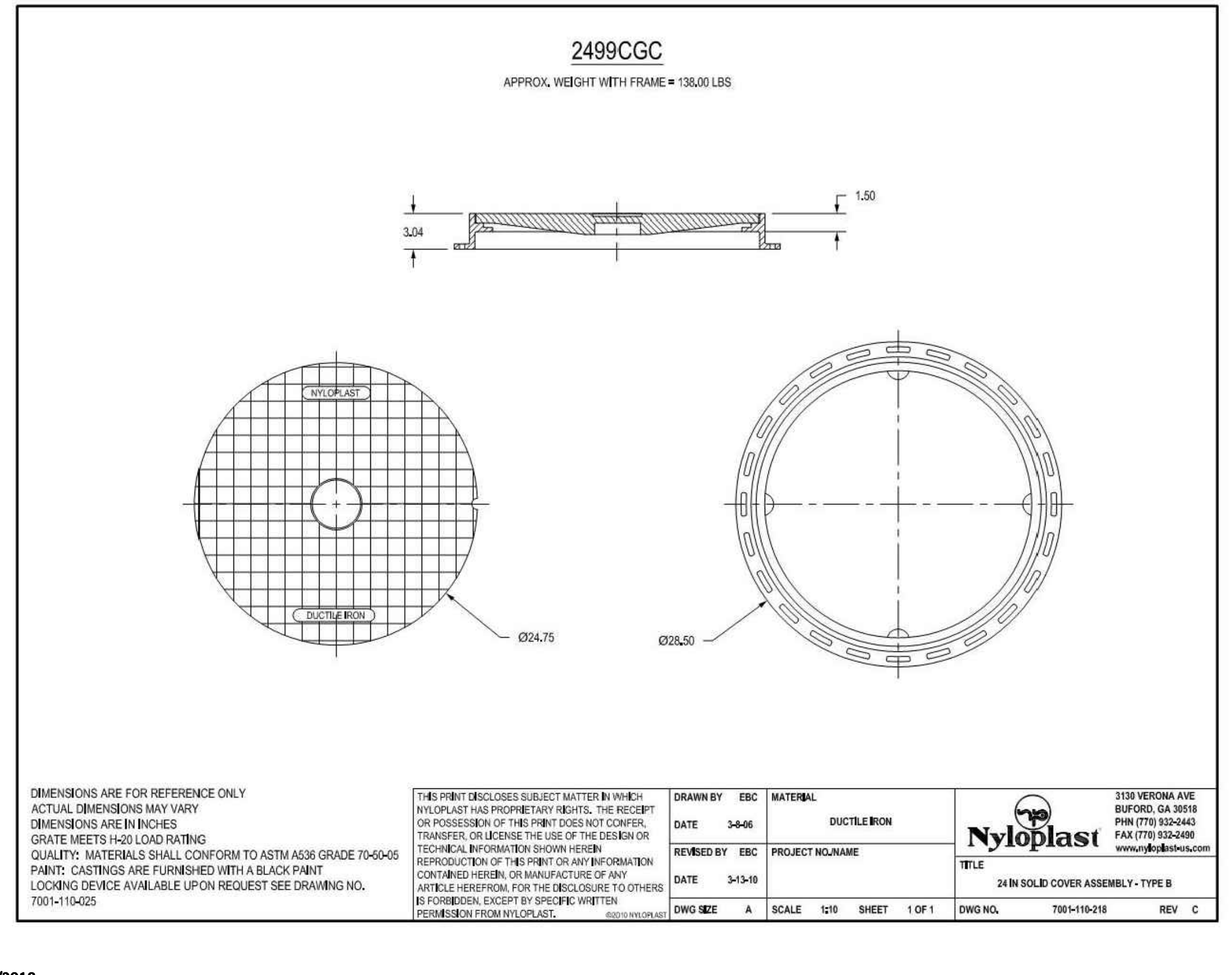
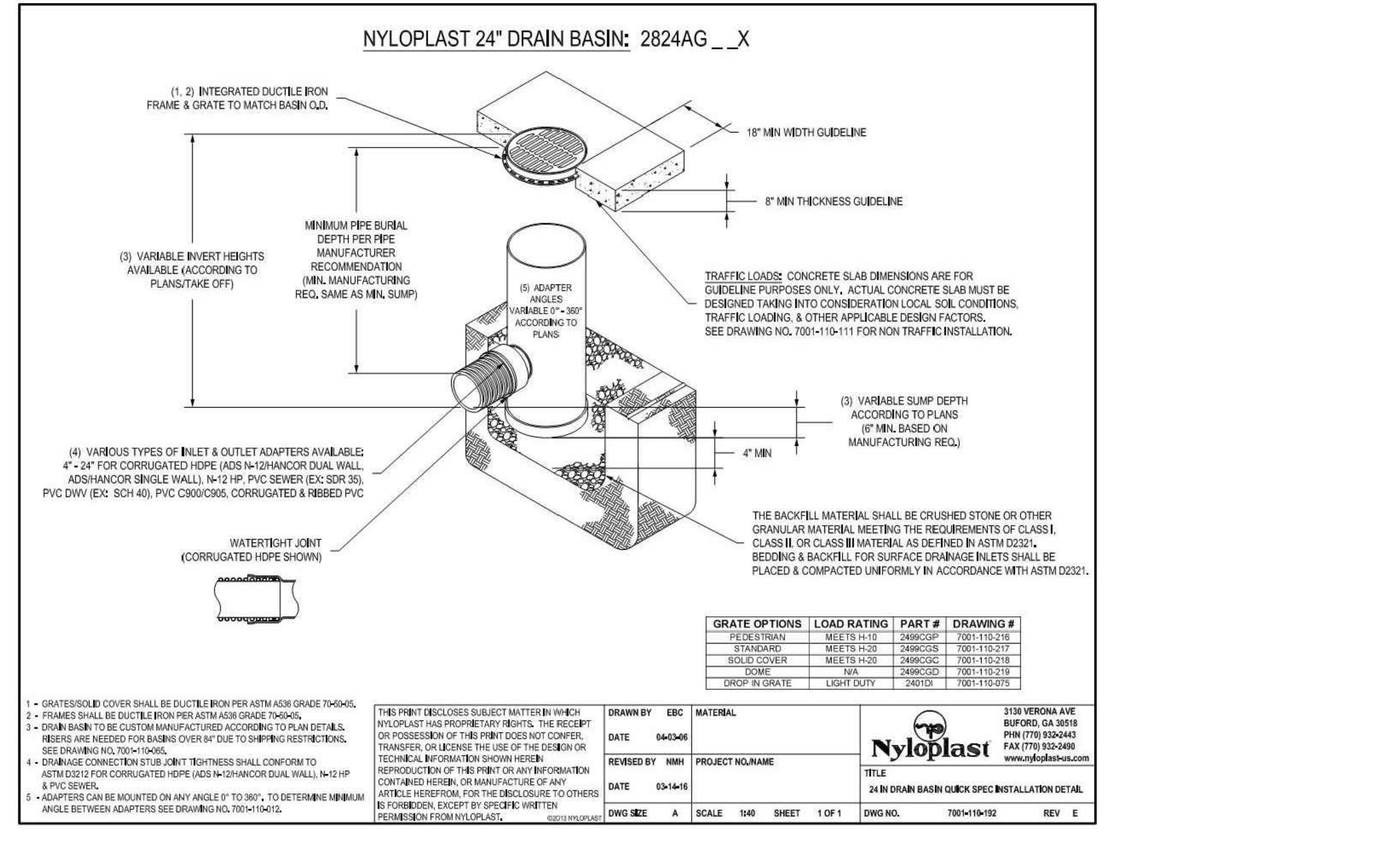
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6 SHEET OF 7



EQUITY TRUST CONVERGENT EAST
 WESTLAKE, OH
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7 SHEET OF 7



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Convergent East

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 Westlake, OH 44145

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STORM SYSTEM DETAILS

SHEET NUMBER:
CS506

