

PROPOSED SITE PLAN DOCUMENTS

FOR

KS Partners owned & managed

PROPOSED

GMP LAB FACILITY

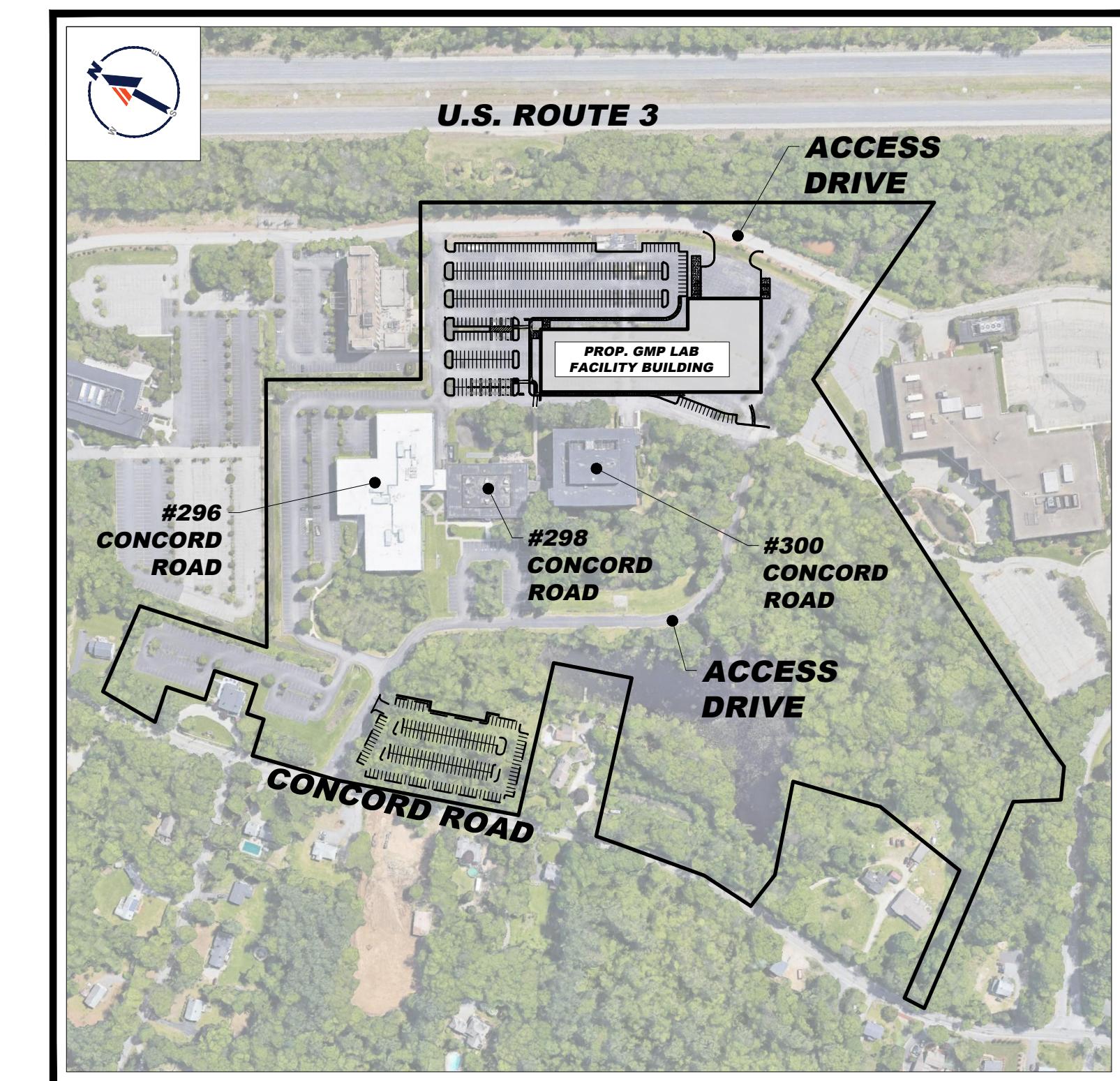
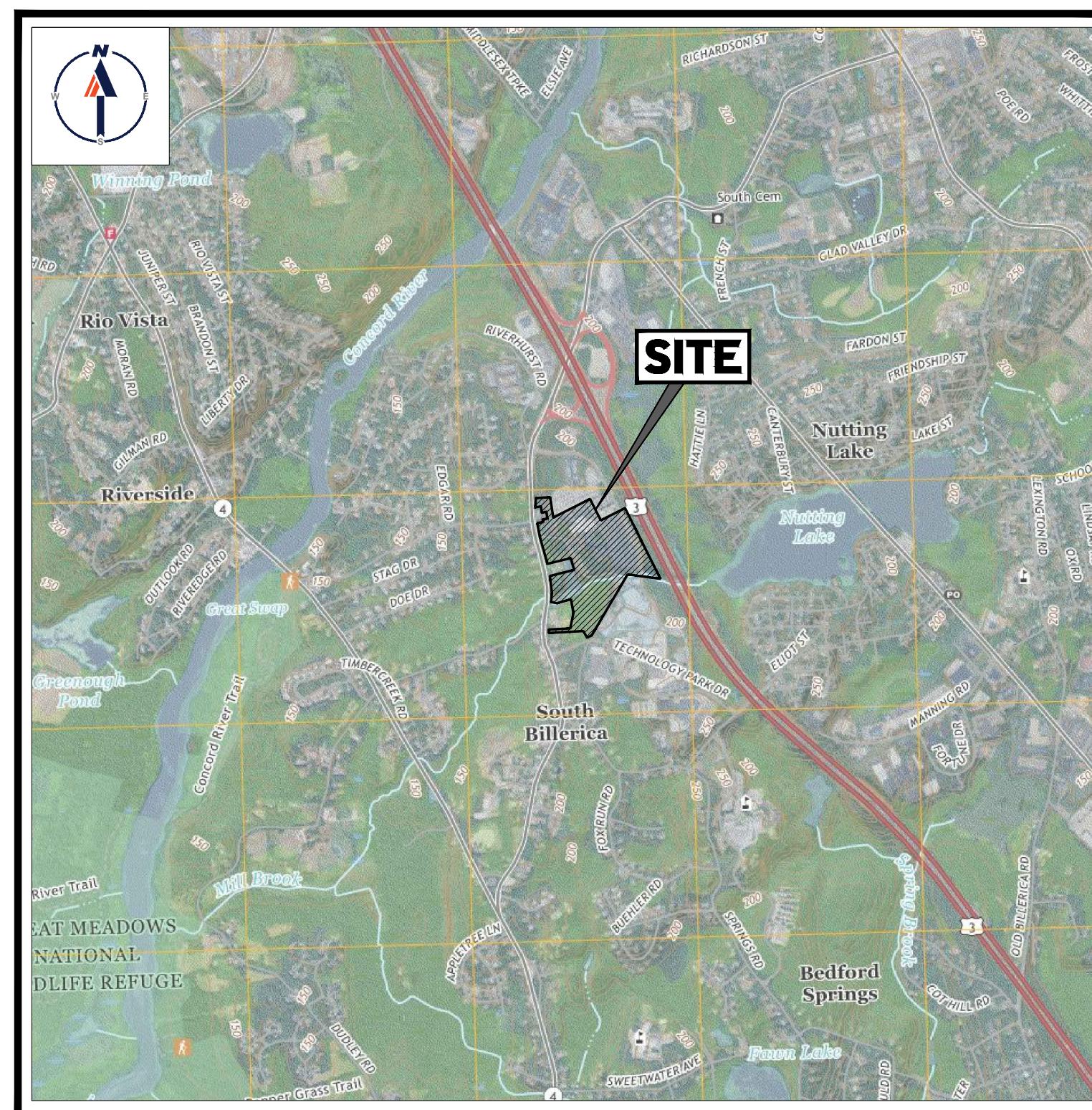
LOCATION OF SITE:

300 CONCORD ROAD

TOWN OF BILLERICA

MIDDLESEX COUNTY, MASSACHUSETTS

MAP 86, BLOCK 108, LOT 5



PREPARED BY

BOHLER //



REVISIONS

REV	DATE	COMMENT	DRAWN BY
0	06/14/21	INITIAL SUBMISSION	J.W.
1	09/28/21	PEER REVIEW RESPONSES	Z.R.



PERMIT SET

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS THE RESPONSIBILITY OF THE DRAWER TO OBTAIN THE APPROPRIATE PERMITTING DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: M211009
DRAWN BY: J.W.
CHECKED BY: Z.R.
DATE: 09/28/2021
CAD I.D.: M211009-DTL

PROJECT:
**SITE
DEVELOPMENT
PLANS**

FOR —

KS Partners owned & managed

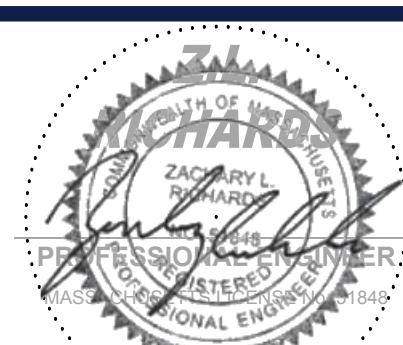
PROPOSED
GMP LAB FACILITY
MAP 86, BLOCK 108, LOT 5
300 CONCORD ROAD
TOWN OF BILLERICA
MIDDLESEX COUNTY,
MASSACHUSETTS

DRAWING SHEET INDEX

SHEET TITLE	SHEET NUMBER
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GENERAL NOTES SHEET	C-102
OVERALL SITE LAYOUT PLAN	C-301
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GRADING AND DRAINAGE PLAN	C-401
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DETAIL SHEET	C-901
DETAIL SHEET	C-902
BOUNDARY, PARTIAL TOPOGRAPHIC & UTILITY SURVEY (BY OTHERS)	1-4 OF 4

BOHLER //

45 FRANKLIN STREET, 5th FLOOR
BOSTON, MA 02110
Phone: (617) 849-8040
www.BohlerEngineering.com

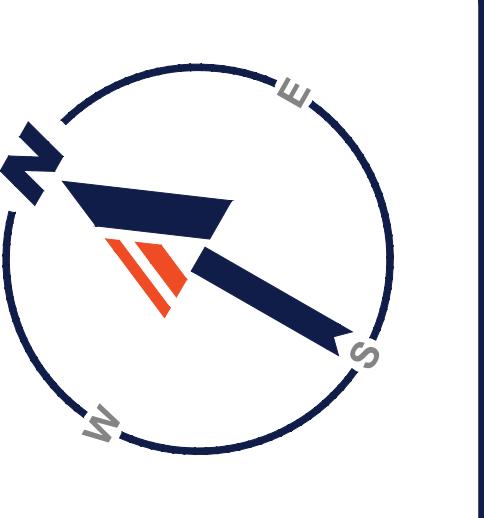


SHEET TITLE:

**COVER
SHEET**

SHEET NUMBER:
C-101

REVISION 1 - 09/28/2021



U.S. ROUTE

(PUBLIC - VARIABLE WIDTH)

THIS PLAN TO BE UTILIZED FOR SITE LAYOUT PURPOSES ONLY. REFER TO GENERAL NOTES SHEET FOR ADDITIONAL NOTES.

**THIS PLAN TO BE UTILIZED FOR
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REFER TO GENERAL NOTES
SHEET FOR ADDITIONAL NOTES.**

SHEET TITLE:

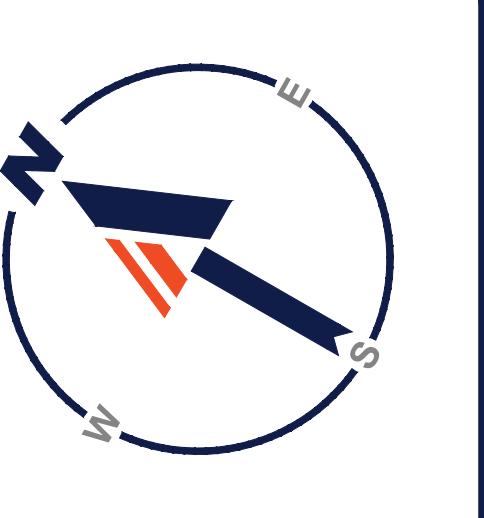
BOULDER

**PROPOSED
GMP LAB FACILITY**

KS Partners

PERMIT SET

The logo for Bohleer consists of the word "BOHLEER" in a large, bold, dark blue sans-serif font. Above the letter "B", there is a small "TM" symbol. To the right of the company name is a vertical list of services, separated by a thin black line. The services listed are: SITE CIVIL AND CONSULTING ENGINEERING, LAND SURVEYING, PROGRAM MANAGEMENT, LANDSCAPE ARCHITECTURE, SUSTAINABLE DESIGN, PERMITTING SERVICES, and TRANSPORTATION SERVICES. Each service item is preceded by a small orange double-slash symbol (//).



U.S. ROUTE

(PUBLIC - VARIABLE WIDTH)

APPROX LIMITS OF ZONE A
(PER REF #2 & #3)

APPROX LIMITS OF
X-UNSHADED
(PER REF #2 & #3)

3

**THIS PLAN TO BE UTILIZED
FOR SITE GRADING PURPOSES
ONLY. REFER TO GENERAL
NOTES SHEET
FOR ADDITIONAL GRADING &
UTILITY NOTES.**

The logo for Bohleer consists of the word "BOHLEER" in a large, bold, dark blue sans-serif font. Above the letter "B", there is a small "TM" symbol. To the right of the company name is a vertical list of services, separated by a thin black line. The services listed are: SITE CIVIL AND CONSULTING ENGINEERING, LAND SURVEYING, PROGRAM MANAGEMENT, LANDSCAPE ARCHITECTURE, SUSTAINABLE DESIGN, PERMITTING SERVICES, and TRANSPORTATION SERVICES. Each service name is in a smaller, dark blue sans-serif font.

REVISIONS		
REV	DATE	COMMENT
0	05/14/21	INITIAL SUBMISSION
1	09/28/21	PEER REVIEW RESPONSES



PERMIT SET

PERMIT SET

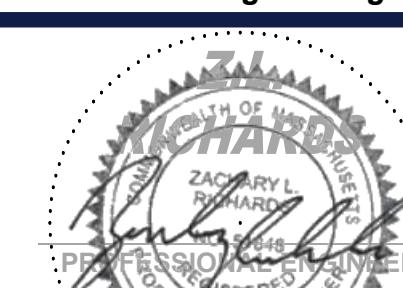
SITE DEVELOPMENT PLANS

PLANS

**PROPOSED
GMP LAB FACILITY**

BOHLER

45 FRANKLIN STREET, 5th FL
BOSTON, MA 02110



SHEET TITLE: ***GRADING
AND
DRAINAGE
PLAN***

SHEET NUMBER: 2421

C-401



U.S. ROUTE

(PUBLIC - VARIABLE WIDTH)

**CONTRACTOR IS TO BE
PROHIBITED FROM STOCKPILING
MATERIALS OF ANY KIND WITHIN
THE BUFFER ZONE OF WETLANDS**

SEE SWPPP FOR ADDITIONAL INFORMATION.

**THIS PLAN TO BE UTILIZED FOR
SITE SOIL AND EROSION CONTROL
PURPOSES ONLY**

**REFER TO SOIL EROSION CONTROL
NOTES & DETAIL SHEET FOR
EROSION NOTES AND DETAILS**

REV

REV	DATE
0	05/14/21
1	09/28/21



PFR

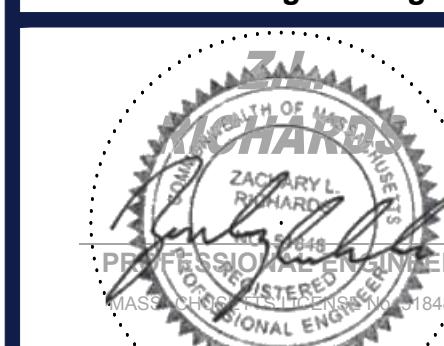
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REVIEW AND APPROVAL. IT IS
DOCUMENT UNLE

PROJECT No.:
DRAWN BY:
CHECKED BY:
DATE:
CAD I.D.:

SITE DEVELOPMENT PLANS

**PROPOSED
GMP LAB FACILITY**

BOHLER



SHEET TITLE: **SOIL EROSION
AND SEDIMENT
CONTROL PLAN**

SHEET NUMBER:

C-601

ESTATE PLANNING & LEADERSHIP

EROSION AND SEDIMENT CONTROL NOTES

- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND EROSION CONTROL MANUAL.
- THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM OF 7 DAYS PRIOR TO THE FIRST KILLING FROST. THE CONTRACTOR SHALL PREPARE STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM OR POND, THE AREA SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY STORM EVENT (THIS WOULD INCLUDE WETLANDS).
- SEDIMENT BARRIERS (SILT FENCE, STRAW BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THEM. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15% AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
- INSTALL SILTATION BARRIER AT TOE OF SLOPE TO FILTER SILT FROM RUNOFF. SEE SILTATION BARRIER DETAILS FOR PROPER INSTALLATION. SILTATION BARRIER WILL REMAIN IN PLACE PER NOTE 5.
- ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING CONSTRUCTION. ALL EROSION CONTROL STRUCTURES THAT ARE NOT STABILIZED BY THE END OF THE CONSTRUCTION OR DECOMPOSITION, SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHILE DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF.
- NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2:1).
- IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
- TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.
- DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS.
- REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:

- SIX INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
- APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIME IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 LBS PER ACRE OR 18.4 LBS PER 1,000 SF USING 10-20 OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SF).

- ENTIRE SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED TO A MIXTURE OF 47% CREEPING RED FESCUE, 43% TURF RED FESCUE, AND 8% LAYERED RED FESCUE, AND 12% PERENNIAL RYEGRASS. SEEDING RATE IS 1.0 LBS PER 1,000 SF. LAWN SOD MAY BE SUBSTITUTED FOR SEED.

- STRAW MULCH AT THE RATE OF 70-90 LBS PER 1,000 SF. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS WILL BE USED ON STRAW MULCH FOR WIND CONTROL.

- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED.

- WETLANDS WILL BE PROTECTED WI/ STRAW, COMPOST, AND/OR SILT FENCE BARRIERS INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.

- ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL HAVE AN EXPOSURE WINDOW OF NOT MORE THAN 7 DAYS.

- ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IF NOT BEING ACTIVELY WORKED.

- MULCH

- LOCATION MULCH PROTECT AREA MULCH RATE (1000 SF)

- WINDY AREA SHREDDED OR CHOPPED CORNSTALKS STRAW (ANCHORED)* 185-275 POUNDS 100 POUNDS

- MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES GREATER THAN 3:1 JUTE MESH OR EXCLOSURE MAT AS REQUIRED

- GREATER THAN 3:1 (REFER TO GEOTECHNICAL REPORT FOR FINAL DESIGN REQUIREMENT)

- A HYDRO-APPLICATION OF WOOD, OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS SHALL BE USED ON STRAW MULCH FOR WIND CONTROL.

- MULCH ANCHORING ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD/BLOCK); MULCH NETTING (AS PER MANUFACTURER); WOOD CELLULOSE FIBER (750 LBS/ACRE); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); USE OF A SERRATED STRAIGHT DISK WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

- EROSION CONTROL NOTES DURING WINTER CONSTRUCTION**

1. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.

2. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.

3. EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.

4. CONTINUATION OF EARTHWORK OPERATION ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.

5. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.

6. EXCEPT ON THE DATES OF OCTOBER 15 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING OR WOOD CELLULOSE FIBER. MULCH NETTING WILL NOT BE REQUIRED DURING PERIODS OF ABOVE FREEZING TEMPERATURES. MULCH NETTING SHALL BE FINALLY GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN GRADED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 200 TONS PER ACRE. DORMANT SEEDING IS NOT RECOMMENDED DURING FREEZING WEATHER. ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT UNEXPOSED OVER THE WINTER OR ANY PERIOD OF TIME LONGER THAN 10 DAYS. EXPOSED AREAS SHALL BE PROTECTED FROM EROSION BY THE APPLICATION OF BALES OF STRAW OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.

7. MULCHING REQUIREMENTS:

1. BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING OR WOOD CELLULOSE FIBER.

2. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGEWAYS WITH A SLOPE GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.

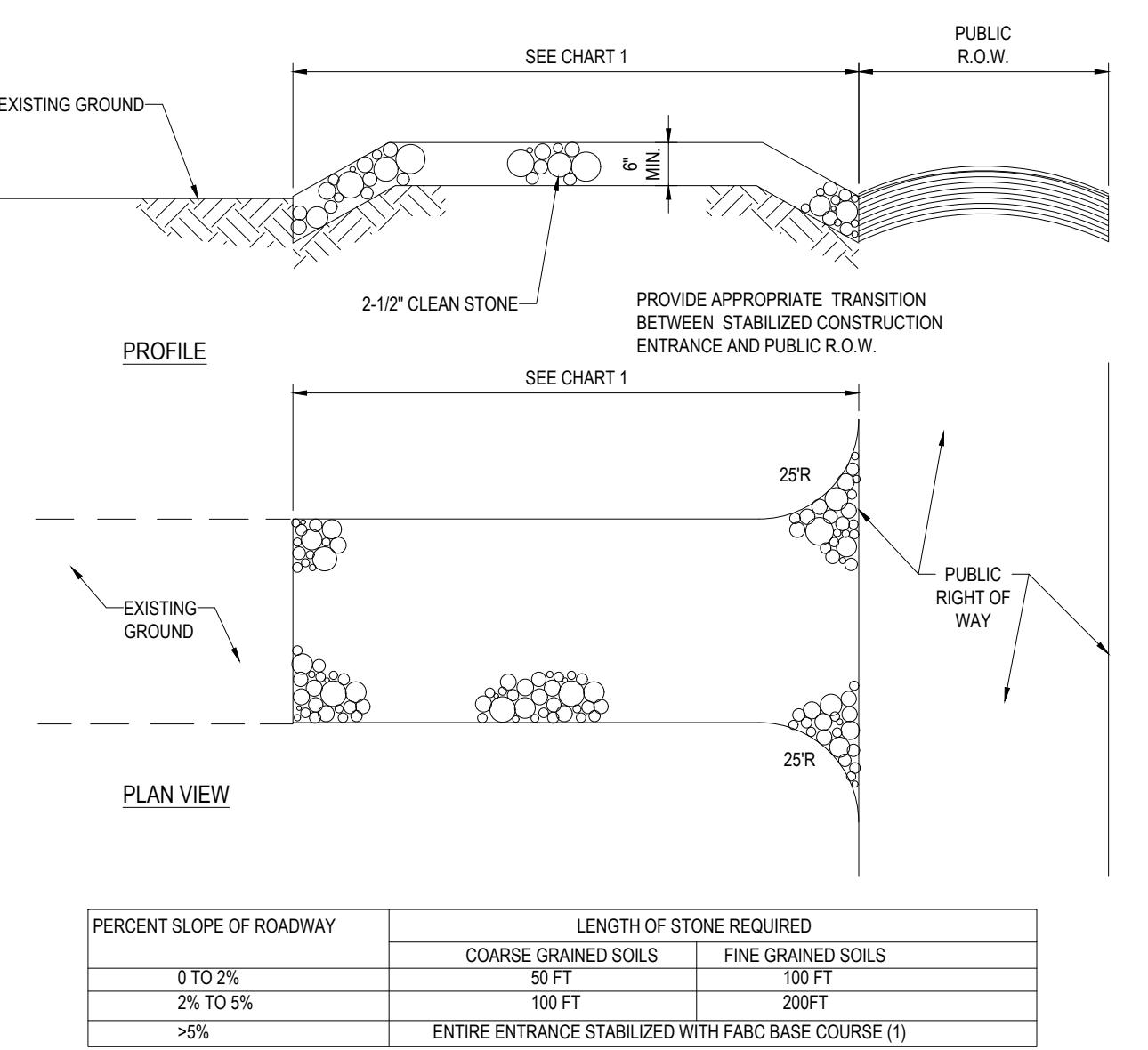
3. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15% AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.

4. AFTER NOVEMBER 1ST THE CONTRACTOR SHALL APPLY DORMANT SEEDING OR MULCH AND ANCHORING ON ALL BARE EARTH AT THE END OF EACH WORKING DAY.

5. DURING THE WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

10. STOCKPILING OF MATERIALS (DIRT, WOOD, CONSTRUCTION MATERIALS, ETC) MUST REMAIN COVERED AT ALL TIMES TO MINIMIZE ANY DUST PROBLEMS THAT MAY OCCUR WITH ADJACENT PROPERTIES AND TO PROVIDE MAXIMUM PROTECTION AGAINST EROSION RUNOFF.

11. EXISTING CATCH BASIN STRUCTURES SHALL BE PROTECTED UNTIL SUCH TIME AS THEY ARE REMOVED.

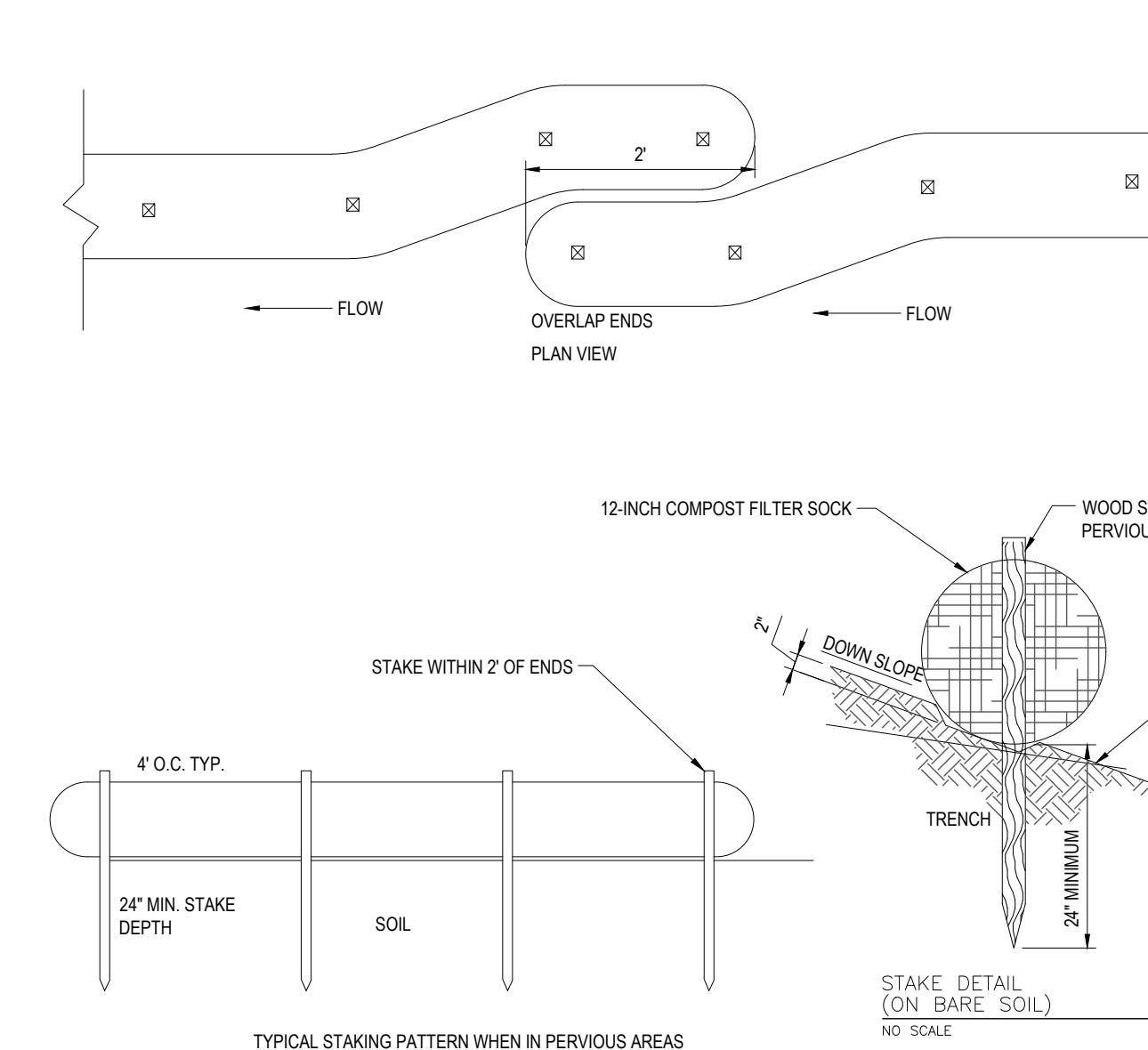


(1) AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

CHART 1

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.



TYPICAL STAKING PATTERN WHEN IN PERVIOUS AREAS

N.T.S.

STABE DETAIL (ON BARE SOIL)

NO SOIL

TOE-IN METHODS

12' MIN. TOE-IN

12' MAX. TOE-IN

6' MIN. LAP

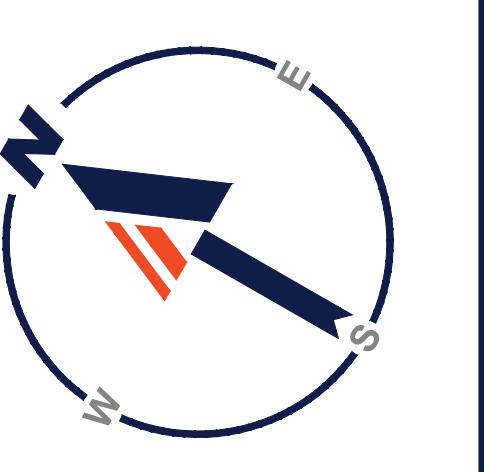
NATIVE SOIL

BACKFILL

POST

SLAT

FABRIC



U.S. ROUTE 3

(PUBLIC - VARIABLE WIDTH)

LANDSCAPE SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONT.
SHADE TREES					
AR	4	ACER RUBRUM	RED MAPLE	2 1/2-3" CAL.	B+B
AROG	5	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2 1/2-3" CAL.	B+B
GTIS	11	GLEDTISIA TRIACANTHOS VAR. INERMIS 'SHADEMASTER'	SHADEMASTER HONEYLOCUST	2 1/2-3" CAL.	B+B
LT	2	LIRIODENDRON TULIPIFERA	TULIP POPLAR	2 1/2-3" CAL.	B+B
QBC	1	QUERCUS BICOLOR	SWAMP WHITE OAK	2 1/2-3" CAL.	B+B
QR	7	QUERCUS RUBRA	RED OAK	2 1/2-3" CAL.	B+B
TA	4	TILIA AMERICANA	BASSWOOD	2 1/2-3" CAL.	B+B
SUBTOTAL:	34				
ORNAMENTAL TREES					
AC	4	AMELANCHIER CANADENSIS	MULTI STEM SHADBLOW SERVICEBERRY	8-10'	B+B
AXGA	6	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE'	SERVICEBERRY	8-10'	B+B
BN	6	BETULA NIGRA	MULTI STEM RIVER BIRCH	12-14'	B+B
CC	10	CERCIS CANADENSIS	EASTERN REDBUD	2-2 1/2" CAL.	B+B
CV	14	CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	6-8'	B+B
SUBTOTAL:	40				
EVERGREEN TREES					
IO	6	ILEX OPACA	AMERICAN HOLLY	6-8'	B+B
TOE	18	THUJA OCCIDENTALIS 'EMERALD'	EMERALD GREEN ARBORVITAE	5-6'	B+B
SUBTOTAL:	24				
DECIDUOUS SHRUBS					
CA	18	CLETHRA ALNIFOLIA	SUMMERSWEET CLETHRA	24-30"	CONTAINER
CAMO	14	CORNUS AMOMUM	SILKY DOGWOOD	3-4'	B+B
CLF	16	CALYCANTHUS FLORIDUS	SWEETSHRUB	24-30"	CONTAINER
LB	18	LINDERA BENZOIN	SPICEBUSH	30-36"	CONTAINER
MP	14	MYRICA PENNSYLVANICA	NORTHERN BAYBERRY	30-36"	B+B
RAGL	30	RHUS AROMATICA "GRO-LOW"	GRO-LOW SUMAC	1 GAL.	CONTAINER
VPN	9	VIBURNUM NUDUM	POSSOMHAW VIBURNUM	3-4'	B+B
SUBTOTAL:	119				
EVERGREEN SHRUBS					
RPJM	10	RHODODENDRON CAROLINIANA X PJM	PJM RHODODENDRON	24-30"	B+B
SUBTOTAL:	10				
PERENNIALS					
ANA	12	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	2 GAL.	CONTAINER
NFD	62	NEPETA X FAASSENII 'DROPMORE'	DROPMORE CAT MINT	2 GAL.	CONTAINER
RFG	33	RUDBECKIA FULGIDA 'GOLDSTURM'	GOLDSTURM/BLACK-EYED SUSAN	2 GAL.	CONTAINER
SUBTOTAL:	107				
ORNAMENTAL GRASSES					
PVS	20	PANICUM VIRGATUM 'SHENANDOAH'	SHENANDOAH SWITCH GRASS	2 GAL.	CONTAINER
SSTB	30	SCHIZACHYRIUM SCOPARIUM 'THE BLUES'	LITTLE BLUE STEM	2 GAL.	CONTAINER
SUBTOTAL:	50				

REVISIONS

PERMIT SET

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SITE DEVELOPMENT PLANS

— FOR —

**PROPOSED
GMP LAB FACILITY**

BOHLER

45 FRANKLIN STREET, 5th FL
BOSTON, MA 02110
Phone: (617) 849-8040

A circular seal with a dotted outer border. The words "MASSACHUSETTS" and "NOTARY PUBLIC" are at the top and bottom respectively, with "THE COMMONWEALTH OF" in the center. The name "MATTHEW J. MRVAN" is in the center. The seal is signed "Matthew" across the center and "MRVAN" on the right.

LANDSCAPE PLAN


SHEET NUMBER:

REVISION 1 - 09/28/2021

**THIS PLAN TO BE UTILIZED FOR
LANDSCAPE PURPOSES ONLY.
REFER TO LANDSCAPE NOTES &
DETAILS SHEET FOR LANDSCAPE
RELATED NOTES AND DETAILS**

A horizontal scale with numerical markings at 30, 15, 7.5, and 0. A thick black horizontal bar spans from the 0 mark to the 30 mark.

1" = 30'



LANDSCAPE SPECIFICATIONS

1. SCOPE OF WORK:
1.1. THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEARING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING OR SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT FOR THE CONSTRUCTION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.

2. MATERIALS:
2.1. GENERAL - ALL LANDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION'S SPECIFICATIONS.

2.2. TOPSOIL - NATURAL, FRIBLAL, LOAMY SILT SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"). WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLOUDS.

2.3. LAWN - ALL PLANTING AREAS SHALL BE TREATED WITH A MINIMUM 1" THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLAUSE AND SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS INDICATED ON THE LANDSCAPE PLAN.

2.4. LAWN SEED MIXTURE SHALL BE FRESH, CLEAN NEW CROP SEED.

2.5. SOD - SOIL SHALL BE STRONGLY ROOTED, WET AND DISEASE/PEST FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4° SHALL BE HELD WITH SOIL IN PLACE.

2.6. MULCH - ALL PLANTING BEDS SHALL BE MULCHED WITH A 3" THICK LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN AND/OR LANDSCAPE PLAN NOTES/DETAILS.

2.7. FERTILIZER:
2.7.1. FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. FERTILIZER SHALL BE STORED IN A WEATHERPROOF PLACE SO THAT IT CAN BE KEPT DRY PRIOR TO USE.

2.7.2. FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 4% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED WITHOUT A SOIL TEST PERFORMED BY A CERTIFIED SOIL LABORATORY.

2.8. PLANT MATERIAL:
2.8.1. ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1, LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN)).

2.8.2. IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRIORITY OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.

2.8.3. PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS TO REMAIN ON AT LEAST ONE PLANT OF EACH SPECIES, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN OR THE FINAL INSPECTION.

2.8.4. TREES WITH AERATION Holes - SUN SCALPS: DISBURSTMENT OR FRESH CUTS OF LIMBS OVER 1", WHICH HAVE NOT BEEN COMPLETELY CALLUSED, SHALL BE RE-ECTED. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.

2.8.5. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OF GROWTH; WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND FREE OF DISEASE, INSECTS, PESTS, EGGS OR LARVAE.

2.8.6. CALIPER MEASUREMENTS OF NURSERY GROWN TREES SHALL BE TAKEN AT A POINT ON THE TRUNK SIX INCHES (6") ABOVE THE GROUND FOR TREES UP TO INCLUDING A FOUR INCH (4") CALIPER. THE CALIPER SHOULD BE MEASURED AT A POINT 12" ABOVE THE GROUND.

2.8.7. SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH. TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.

3. GENERAL WORK PROCEDURES:
3.1. CONTRACTOR TO FOLLOW NORMANLIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.

3.2. WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY BY THE SITE.

4. SITE PREPARATIONS:
4.1. ALL PLANTING AREAS REQUIRING PRELIMINARY GRADING AND FINISHING GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.

4.2. ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LENGTH OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE BRANCH COLLAR. CONTRACTOR SHALL ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH CLEAN SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE CUTS AND RE-BURIED. CONTRACTOR SHALL NOT BE HELD LIABLE FOR ANY DAMAGE TO EXISTING PLANTS OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS REQUIRED TO PREVENT SHOCK OR DECLINE.

4.3. CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO THE BEGINNING OF WORK.

5. TREE PROTECTION:
5.1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE Drip LINE OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICTE TREE PROTECTION ZONE SHALL BE HONORED.

5.2. A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR ORANGE COLORED HIGH-DENSITY VISI-FENCE, OR APPROVED EQUIVALENT, SHALL BE PLACED AROUND THE SITE TO PROTECT THE EXISTING TREES AND THE CONSTRUCTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.

5.3. WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO DEMOLITION, GRADING, TREE CLEARING OR ANY OTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION ZONE SHALL BE REMOVED AND RE-INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.

5.4. AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.

6. SOIL MODIFICATIONS:
6.1. CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.

6.2. LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETERMINAL TO THE GROWTH OF PLANTS. SOIL TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH THE SPECIFICATIONS AS SPECIFIED HEREIN. TO INCREASE A SANDY SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 12". USE COMPOSTED BARK, COMPOSTED LEAF MULCH OR PEAT MOSS. 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.

6.3. TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE WOVEN (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM. CORDED SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. SUBSURFACE DRAINAGE LINES MAY NEED TO BE ADDED UP TO 30% OF THE TOTAL MIX.

7. FINISHED GRADING:
7.1. UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBANCE AREA OF THE SITE.

7.2. LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS (1").

7.3. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF GRADE. GRADE CHANGES SHALL BE MADE IN ACCORDANCE WITH CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.

7.4. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.

8. TOPSOILING:
8.1. CONTRACTOR SHALL PROVIDE A 6" THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT. IN ALL PLANTING AREAS, TOPSOIL SHALL BE SPREAD OVER A PREPARATION SURFACE IN A UNIFORM LAYER TO A MAXIMUM THICKNESS OF 12".

8.2. ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.

8.3. CONTRACTOR SHALL FURNISH TO THE APPROVING AGENCY AN ANALYSIS OF BOTH IMPORTED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.

8.4. CULTIVATION AREAS SHALL BE CULTIVATED AS DIRECTED BY THE APPROVING AGENCY. DRAINAGE AREAS FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS: QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA - FOR BID PURPOSES ONLY (SEE SPECIFICATION 6.4):

8.4.1. 10 POUNDS GRO-POWER OR APPROVED SOIL CONDITIONER/FERTILIZER

8.4.2. 20 POUNDS NITRO-FORM (COURSE) 3/8" & 1/2" BLUE CHIP OR APPROVED NITROGEN FERTILIZER

8.4.3. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.

9. PLANTING:
9.1. INSURE THAT IT IS FEASIBLE. PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THAT THIS IS NOT POSSIBLE, LANDSCAPE CONTRACTOR SHALL PROTECT UNPLANTED PLANT MATERIAL. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. PLANTS THAT WILL NOT BE PLANTED FOR A PERIOD OF TIME GREATER THAN THREE DAYS SHALL BE HEALED IN WITH TOPSOIL OR MULCH TO HELP PRESERVE ROOT MOISTURE.

9.2. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN MUDDY OR FROZEN CONDITION.

9.3. ANY INJURED ROOTS OR BRANCHES SHALL BE PRUNED TO MAKE CLEAN-CUT ENDS PRIOR TO PLANTING UTILIZING CLEAN, SHARP TOOLS. ONLY INJURED OR DISEASED BRANCHES SHALL BE REMOVED.

9.4. ALL PLANTING CONTAINERS, BASKETS AND NON-BIODEGRADABLE MATERIALS SHALL BE REMOVED FROM ROOT BALLS DURING THE ROOT BALL FOLD BURLAP BACK 1/3 FROM ROOT BALL.

9.5. POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO EXCAVATING PLANTS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.

9.6. REFER TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY FOR THE PROPOSED LANDSCAPE, AS SHOWN ON THE APPROVING AGENCY'S PLANS. THE APPROVING AGENCY SHALL BE NOTIFIED OF ANY CHANGES MADE TO THE PLANTING PLAN. THE APPROVING AGENCY SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVERS SHALL OCCUR ONLY DURING THE FOLLOWING PLANTING SEASONS:

9.6.1. PLANTS: MARCH 15 TO DECEMBER 15

9.6.2. LAWN: MARCH 15 TO JUNE 15 SEPT. 1 TO DECEMBER 1

9.6.3. PLANTINGS REQUIRED FOR A CERTIFICATE OF OCCUPANCY SHALL BE PROVIDED DURING THE NEXT APPROPRIATE SEASON AT THE MUNICIPALITY'S DISCRETION. CONTRACTOR SHOULD CONTACT APPROVING AGENCY FOR POTENTIAL SUBMISSIONS.

9.7. FURTHERMORE, THE FOLLOWING TREE VARIETIES ARE UNUSUALLY SUSCEPTIBLE TO WINTER DAMAGE. WITH TRANSPLANT SHOCK AND THE SEASONAL LACK OF NITROGEN AVAILABILITY, THE RISK OF PLANT DEATH IS GREATLY INCREASED. IT IS NOT RECOMMENDED THAT THESE SPECIES BE PLANTED DURING THE FALL PLANTING SEASON:

ACER RUBRUM PLATANUS X ACERIFOLIA
BETULUS ALNIFOLIA PLATANUS VARIETIES
CARPINUS VARIETIES PRUNUS VARIETIES
CRATAEGUS VARIETIES PYRUS VARIETIES
KOELREUTERIA QUERCUS VARIETIES
LIQUIDAMBAR STYRACIFLUA TILI TAMENTOSA
LINDERA BARKI ZELKOVA VARIETIES

9.8. PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACKFILLED IN LAYERS WITH THE FOLLOWING PREPARED SOIL, MIXED THOROUGHLY:

9.8.1. 1 PART PEAT MOSS

9.8.2. 1 PART COMPOSTED COW MANURE BY VOLUME

9.8.3. 3 PARTS TOPSOIL BY VOLUME

9.8.4. 21 GRAMS 'AGRFORM' PLANTING TABLETS (OR APPROVED EQUAL) AS FOLLOWS:

9.8.4.1. 2 TABLETS PER 1 GALLON PLANT
9.8.4.2. 3 TABLETS PER 1/2 GALLON PLANT
9.8.4.3. 4 TABLETS PER 1/4 GALLON PLANT
9.8.4.4. LARGER PLANTS: 2 TABLETS PER 1" CALIPER OF TRUNK

9.9. FILL PREPARED SOIL AROUND BALL OF PLANT HALF-WAY AND INSERT PLANT TABLETS. COMPLETE BACKFILL AND WATER THOROUGHLY.

9.10. ALL PLANTS SHALL BE PLANTED SO THAT THE TOP OF THE ROOT BALL, THE POINT AT WHICH THE ROOT FLARE BEGINS, IS SET AT GROUND LEVEL AND IN THE CENTER OF THE PIT. NO SOIL IS TO BE PLACED DIRECTLY ON TOP OF THE ROOT BALL.

9.11. ALL PLANTED TREES SHALL BE PRUNED AND MAINTAINED TO A MINIMUM BRANCH HEIGHT OF 7' FROM GROUND.

9.12. GROUND COVER AREAS SHALL RECEIVE A 1" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL, PRIOR TO PLANTING. ALL GROUND COVER AREAS SHALL BE WEEDED AND TREATED WITH A PRE-EMERGENT CHEMICAL AS PER MANUFACTURER'S RECOMMENDATION.

9.13. NO PLANT, EXCEPT GROUND COVER, CROPPERS, GRASSES OR VINES, SHALL BE PLANTED LESS THAN TWO FEET (2') FROM EXISTING STRUCTURES AND/OR VALVE BOXES.

9.14. PLANTING AND PLANTING PITS SHALL BE MULCHED AS SPECIFIED HEREIN TO FILL THE ENTIRE BED AREA OR SAUCER. NO MULCH IS TO TOUCH THE TRUNK OF THE TREE OR SHRUB.

9.15. ALL PLANTING AREAS SHALL BE WATERED IMMEDIATELY UPON INSTALLATION IN ACCORDANCE WITH THE WATERING SPECIFICATIONS AS LISTED HEREIN.

10. TRANPLANTING (WHEN REQUIRED):

10.1. ALL TRANSPLANTS SHALL BE DUG WITH INTACT ROOT BALLS CAPABLE OF SUSTAINING THE PLANT.

10.2. IF PLANTS ARE TO BE STOCKPILED BEFORE REPLANTING, THEY SHALL BE HEALED IN WITH MULCH OR SOIL, ADEQUATELY WATERED AND PROTECTED FROM EXTREME HEAT, SUN AND WIND.

10.3. PLANTS SHALL NOT BE DUG FOR REPLANTING BETWEEN APRIL 10 AND JUNE 30.

10.4. UPON REPLANTING, BACKFILL SOIL SHALL BE AMENDED WITH FERTILIZER AND ROOT GROWTH HORMONE.

10.5. TRANSPLANTS SHALL BE GUARANTEED FOR THE LENGTH OF THE GUARANTEE PERIOD SPECIFIED HEREIN.

10.6. TRANSPLANTS OR SHRUBS AND TREES LESS THAN SIX INCHES (6") DBH SHALL BE REPLACED IN KIND. TREES GREATER THAN SIX INCHES (6") DBH MAY BE REQUIRED TO BE REPLACED IN ACCORDANCE WITH THE MUNICIPALITY'S TREE PROTECTION GUIDELINES.

11. WATERING:
11.1. NEW PLANTINGS OR LAWN AREAS SHALL BE ADEQUATELY IRRIGATED BEGINNING IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACKFILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED. WATERING SHALL CONTINUE AT LEAST UNTIL PLANTS ARE ESTABLISHED.

11.2. SITE OWNER SHALL PROVIDE WATER IF AVAILABLE ON SITE AT TIME OF PLANTING. IF WATER IS NOT AVAILABLE ON SITE, CONTRACTOR SHALL SUPPLY ALL NECESSARY WATER. THE USE OF WATERING BAGS IS RECOMMENDED FOR ALL NEWLY PLANTED TREES.

11.3. IF AN IRRIGATION SYSTEM HAS BEEN INSTALLED ON THE SITE, IT SHALL BE USED TO WATER PROPOSED PLANT MATERIAL, BUT THE CAPACITY OF THE SYSTEM DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY OF MAINTAINING THE DESIRED MOISTURE LEVEL FOR VIGOROUS, HEALTHY GROWTH.

12. GUARANTEE:
12.1. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF 1 YEAR FROM APPROVAL OF LANDSCAPE INSTALLATION BY THE APPROVING AGENCY. CONTRACTOR SHALL SUPPLY THE OWNER WITH A MAINTENANCE BOND FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE CONCLUSION OF THE MAINTENANCE PERIOD AND WHEN A FINAL INSPECTION HAS BEEN COMPLETED AND APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.

12.2. ANY DEAD OR DYING PLANT MATERIAL SHALL BE REPLACED FOR THE LENGTH OF THE GUARANTEE PERIOD. REPLACEMENT OF PLANT MATERIAL SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. ANY DEBRIS SHALL BE DISPOSED OF PROPERLY AND SAFELY.

12.3. TREES AND SHRUBS SHALL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION AND THROUGHOUT THE 90 DAY MAINTENANCE PERIOD AS SPECIFIED HEREIN. CULTIVATION, WEEDING, WATERING AND THE PREVENTATIVE TREATMENTS SHALL BE PERFORMED AS NECESSARY TO KEEP PLANT MATERIAL IN GOOD CONDITION AND FREE OF INSECTS AND DISEASE.

12.4. LAWNS SHALL BE MAINTAINED THROUGH WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING AND OTHER OPERATIONS AS NEEDED. ROLLING, RAKEING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.

13. CLEANUP:
13.1. UPON THE COMPLETION OF ALL LANDSCAPE INSTALLATION AND BEFORE THE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL UNUSED MATERIALS, EQUIPMENT AND DEBRIS FROM THE SITE. ALL PAVED AREAS ARE TO BE CLEANED.

13.2. THE SITE SHALL BE CLEANED AND LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER OR AUTHORIZED REPRESENTATIVE.

14. MAINTENANCE (ALTERNATIVE BID):
14.1. A 90 DAY MAINTENANCE PERIOD SHALL COMMENCE AT THE END OF ALL LANDSCAPE INSTALLATION OPERATIONS. THE 90 DAY MAINTENANCE PERIOD SHALL BE CONDUCTED AT THE FIRST SUCCEEDING PLANTING SEASON. CONTRACTOR SHALL MAINTAIN PLANTS AS SPECIFIED ON THE APPROVING AGENCY'S PLANS. MAINTENANCE SHALL BE CONDUCTED AS NECESSARY TO ENSURE THAT PLANT AND LAWN AREAS ARE HEALTHY AND MANICURED TO THE APPROVAL OF THE OWNER/OPERATOR.

14.2. THE ALTERNATIVE MAINTENANCE CONTRACT WILL ENCOMPASS ANY WORK THAT IS CONSIDERED APPROPRIATE TO ENSURE THAT PLANT AND LAWN AREAS ARE HEALTHY AND MANICURED TO THE APPROVAL OF THE OWNER/OPERATOR.

14.3. MAINTENANCE (ALTERNATIVE BID):
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14.27. MAINTENANCE (ALTERNATIVE BID):
14.28. A 90 DAY MAINTENANCE PERIOD SHALL COMMENCE AT THE END OF ALL LANDSCAPE INSTALLATION OPERATIONS. THE 90 DAY MAINTENANCE PERIOD SHALL

REVISIONS

REV	DATE	COMMENT	DRAWN BY
0	05/14/21	INITIAL SUBMISSION	JW
1	09/28/21	PEER REVIEW	ZLR

RESPONSES

ZLR



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PROJECT No.: M21109
DRAWN BY: JW
CHECKED BY: ZLR
DATE: 09/28/2021
CAD ID: M21109-DTL

PROJECT: SITE DEVELOPMENT PLANS

FOR:

KS Partners Inc.

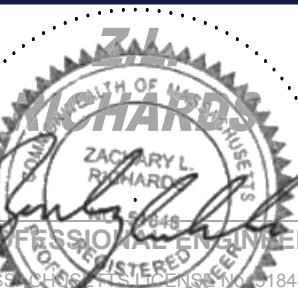
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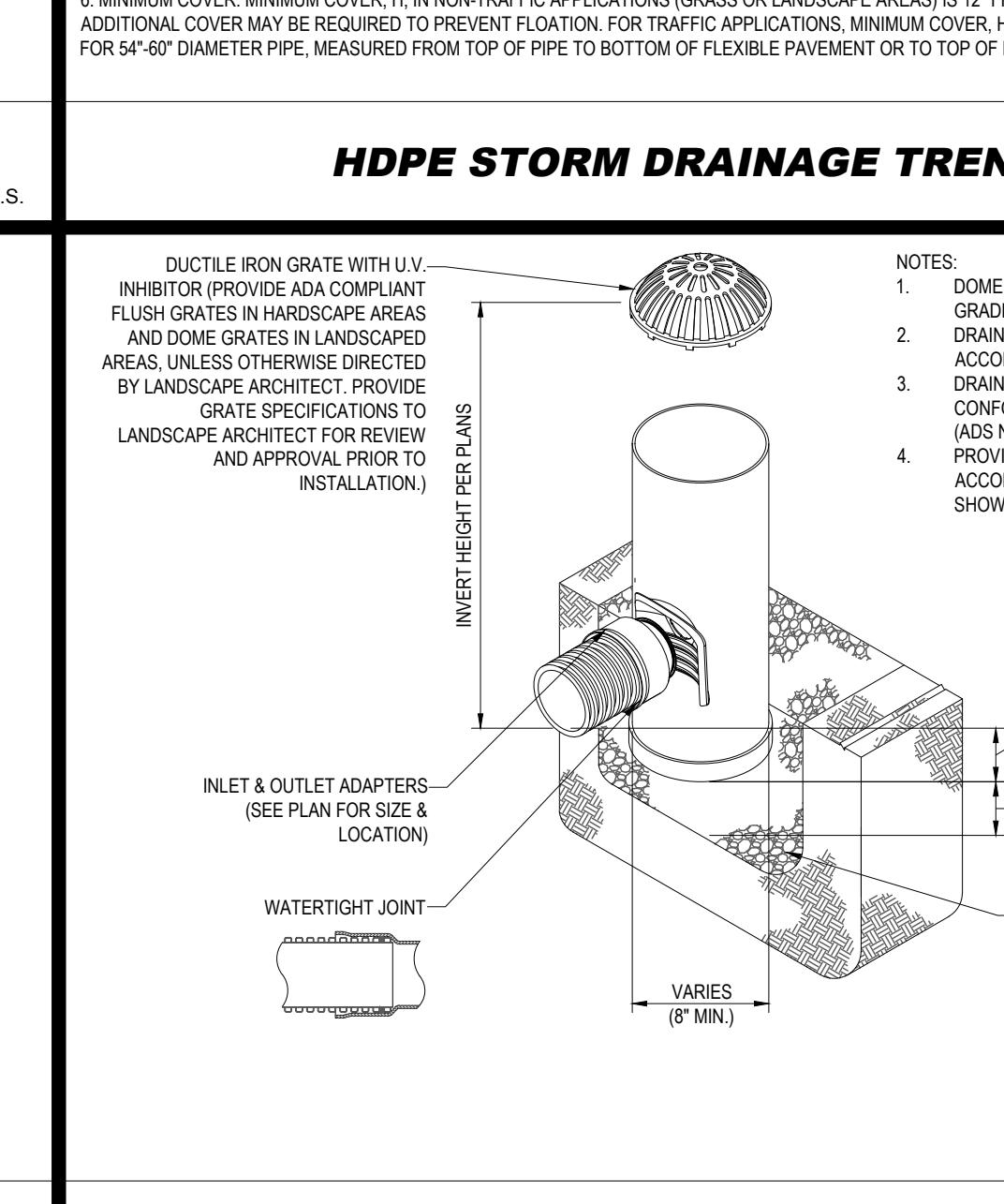
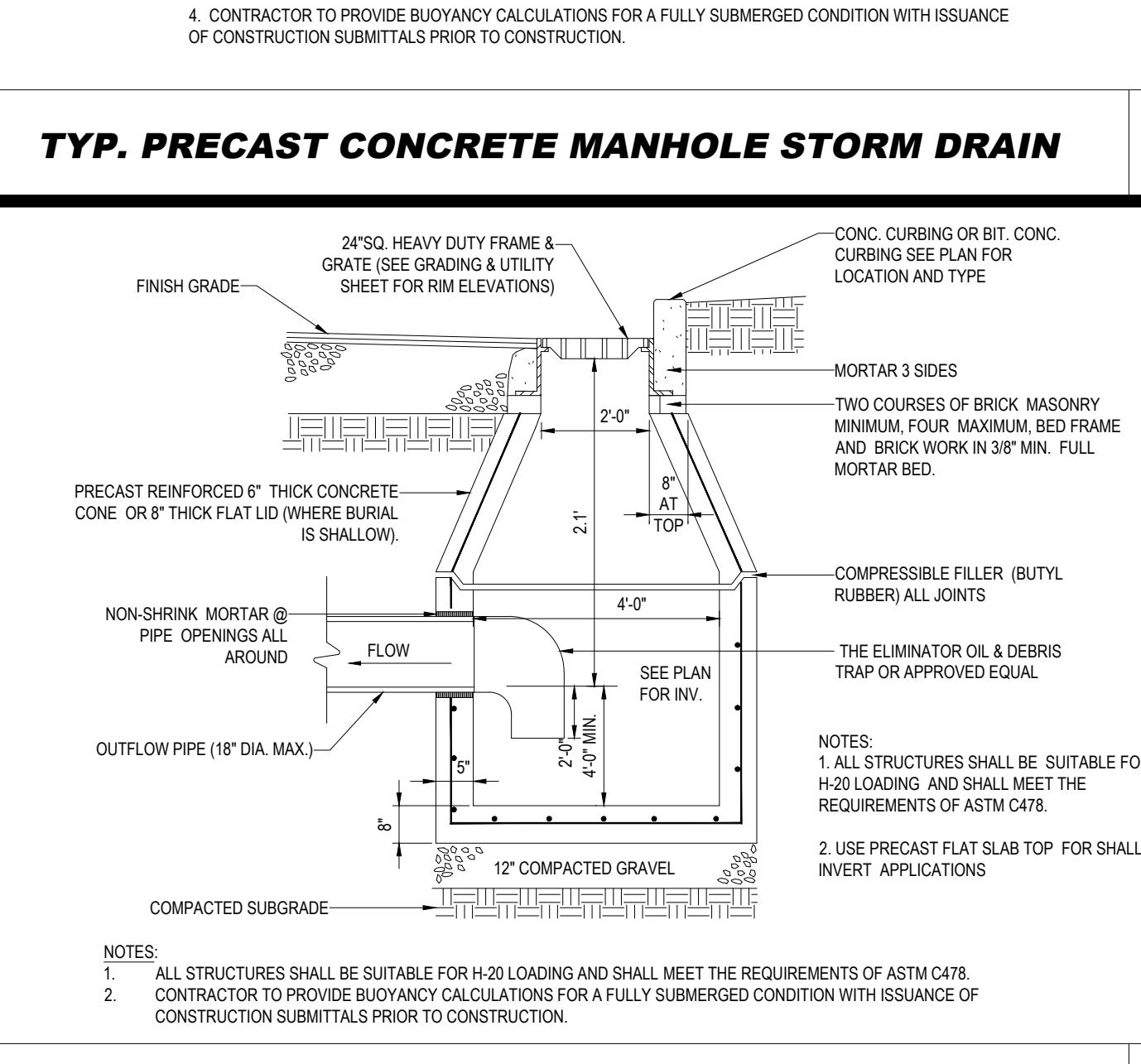
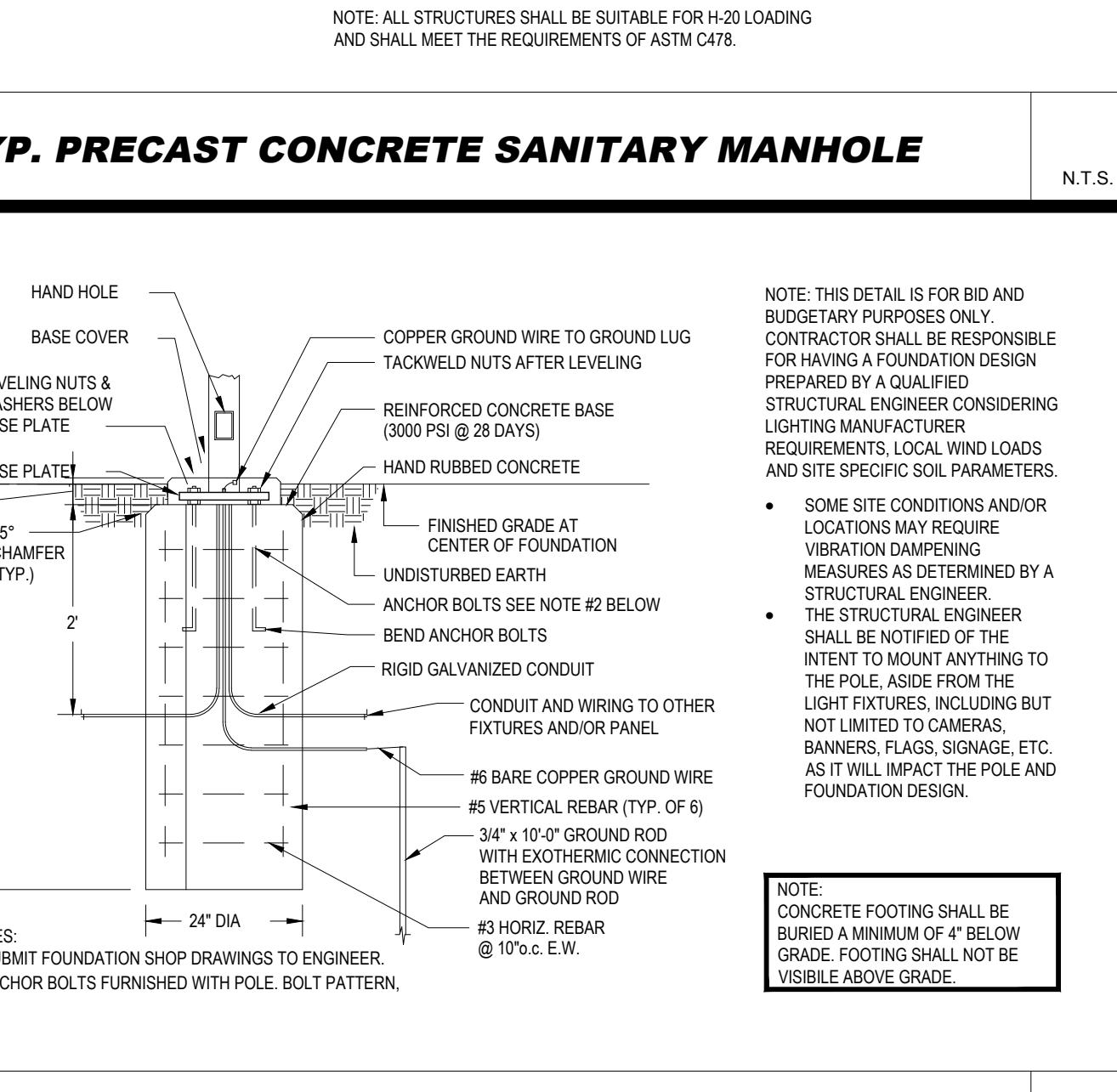
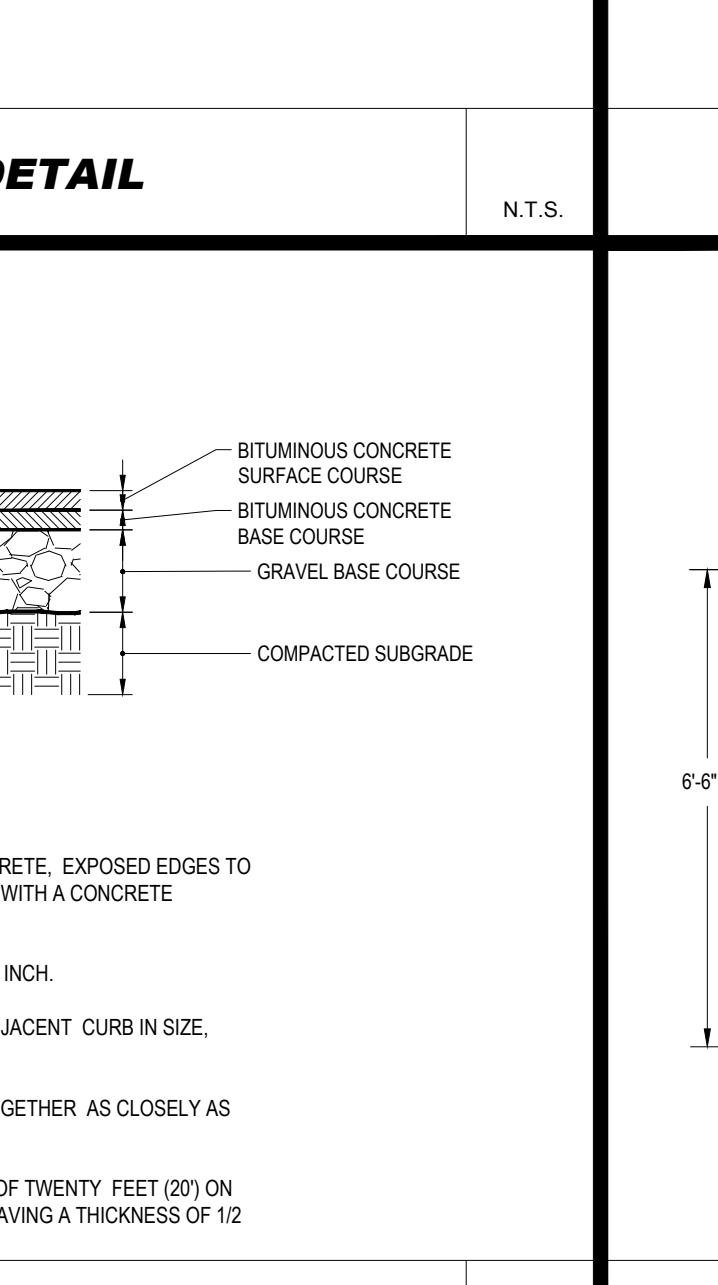
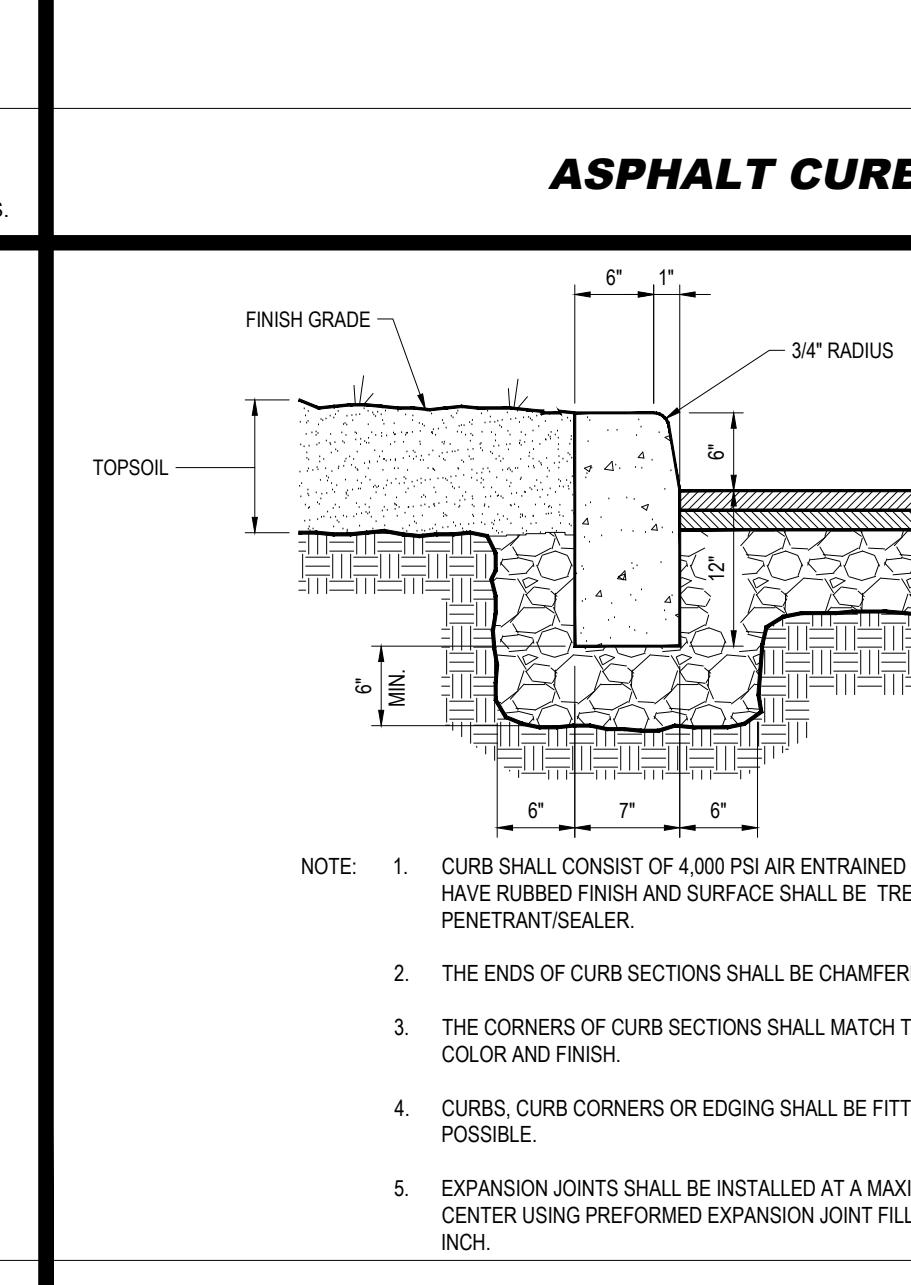
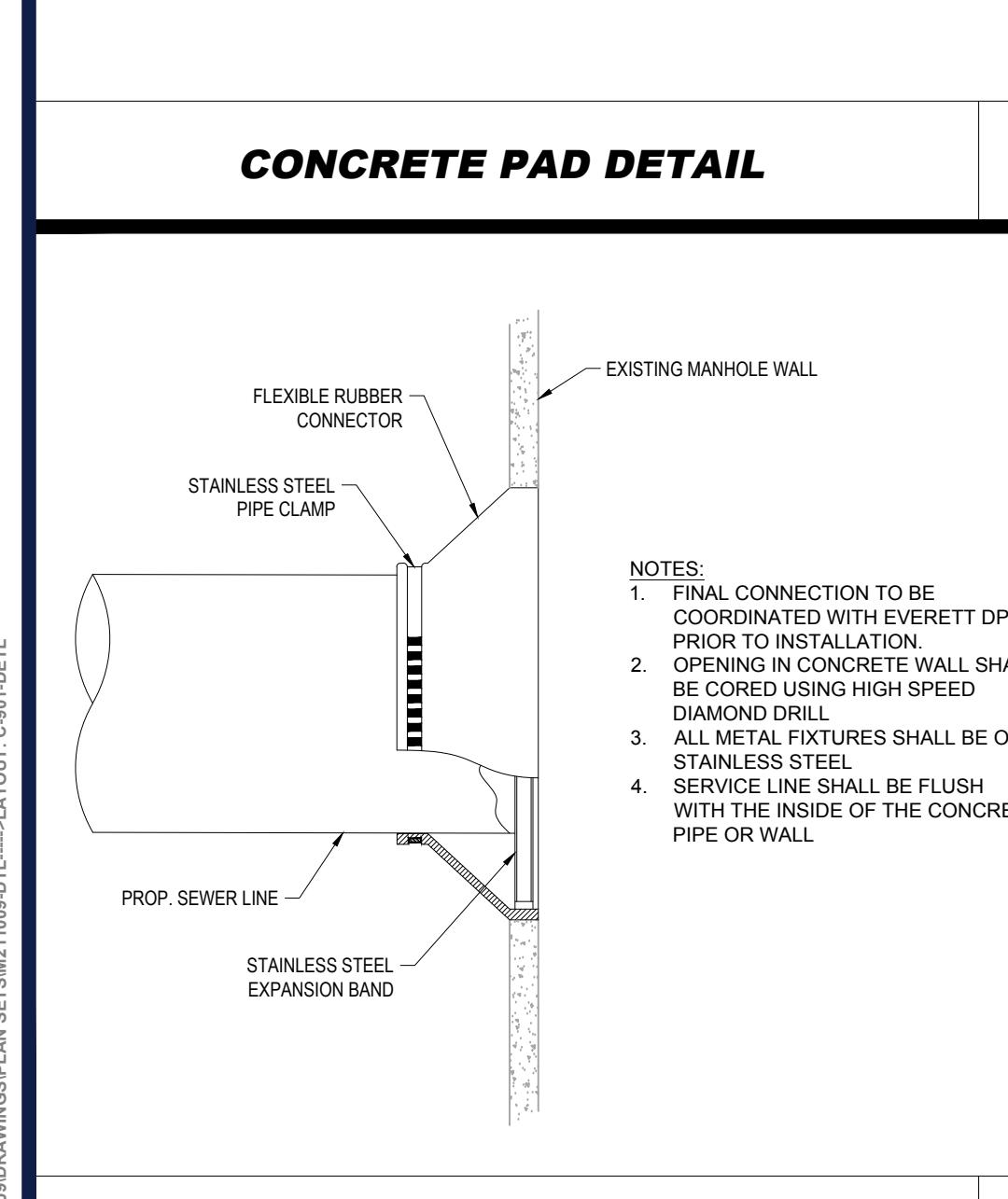
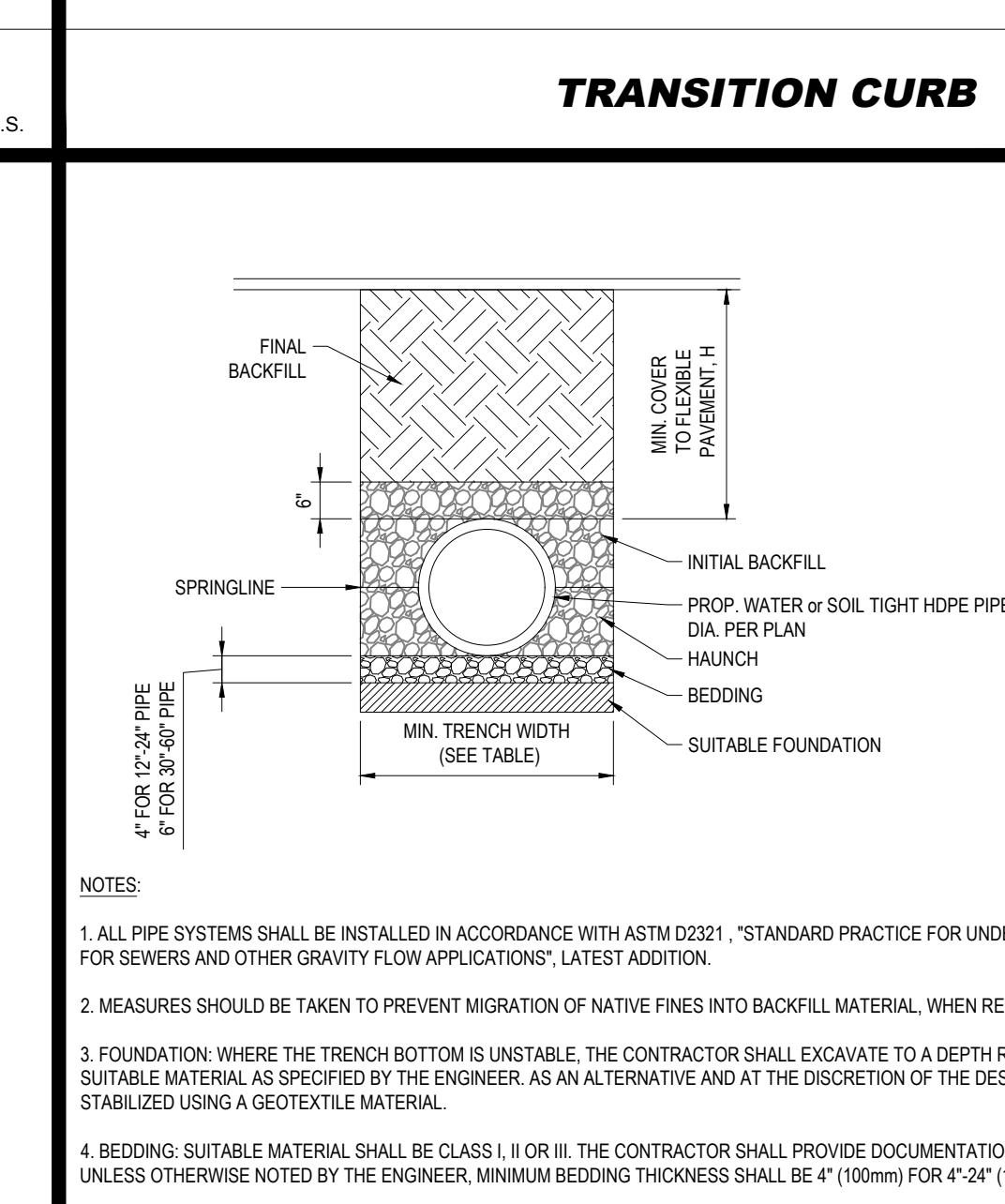
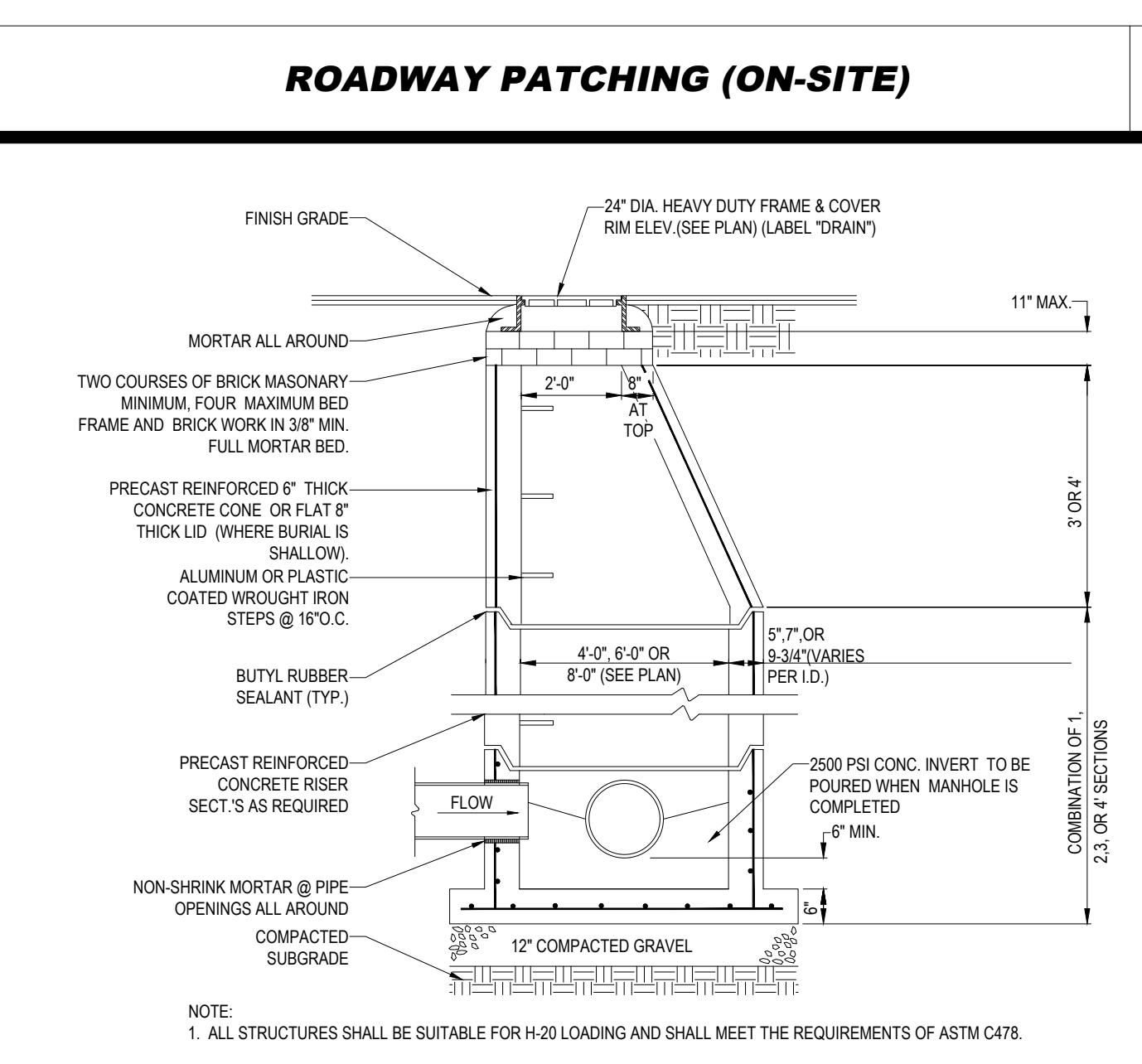
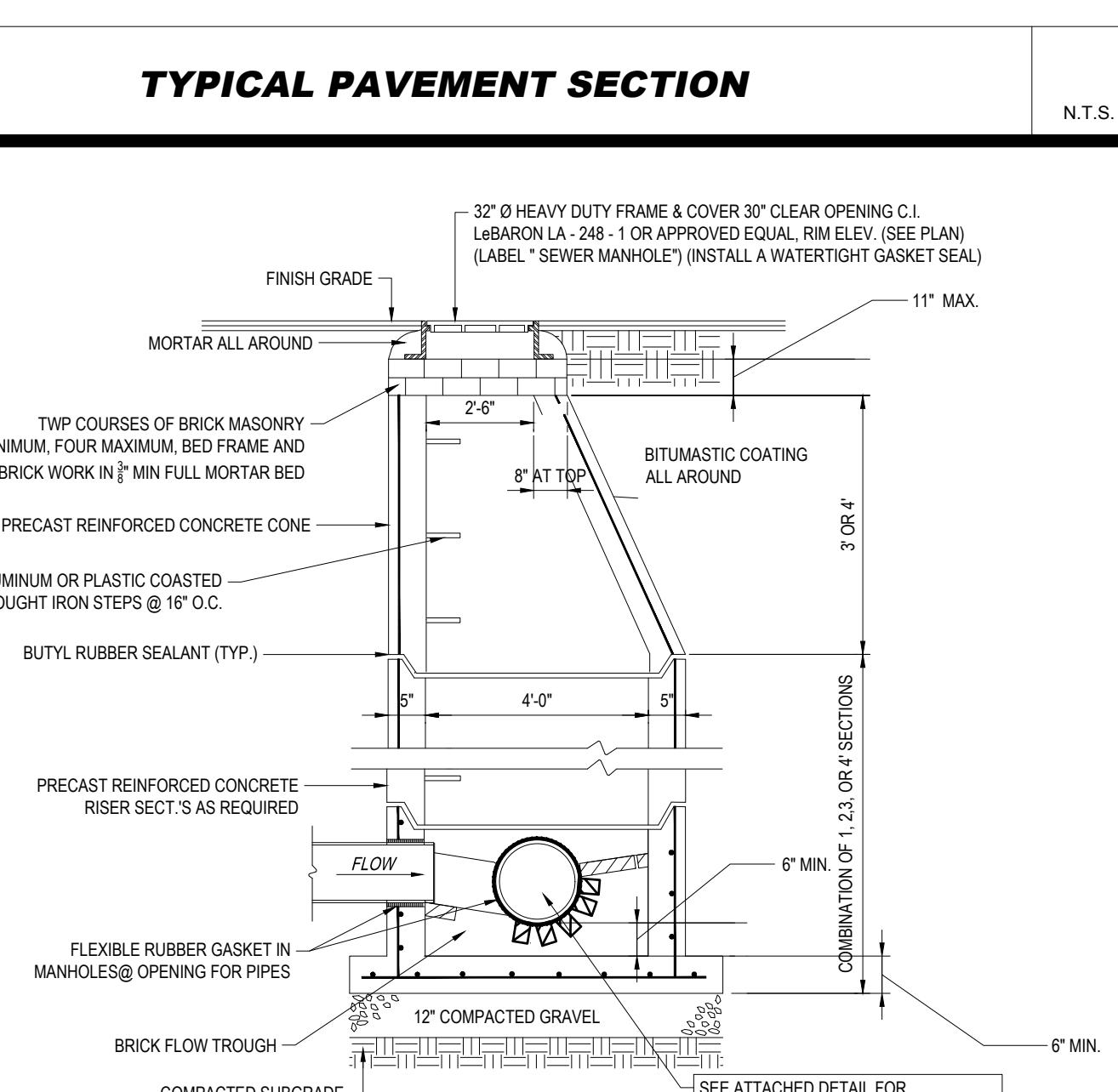
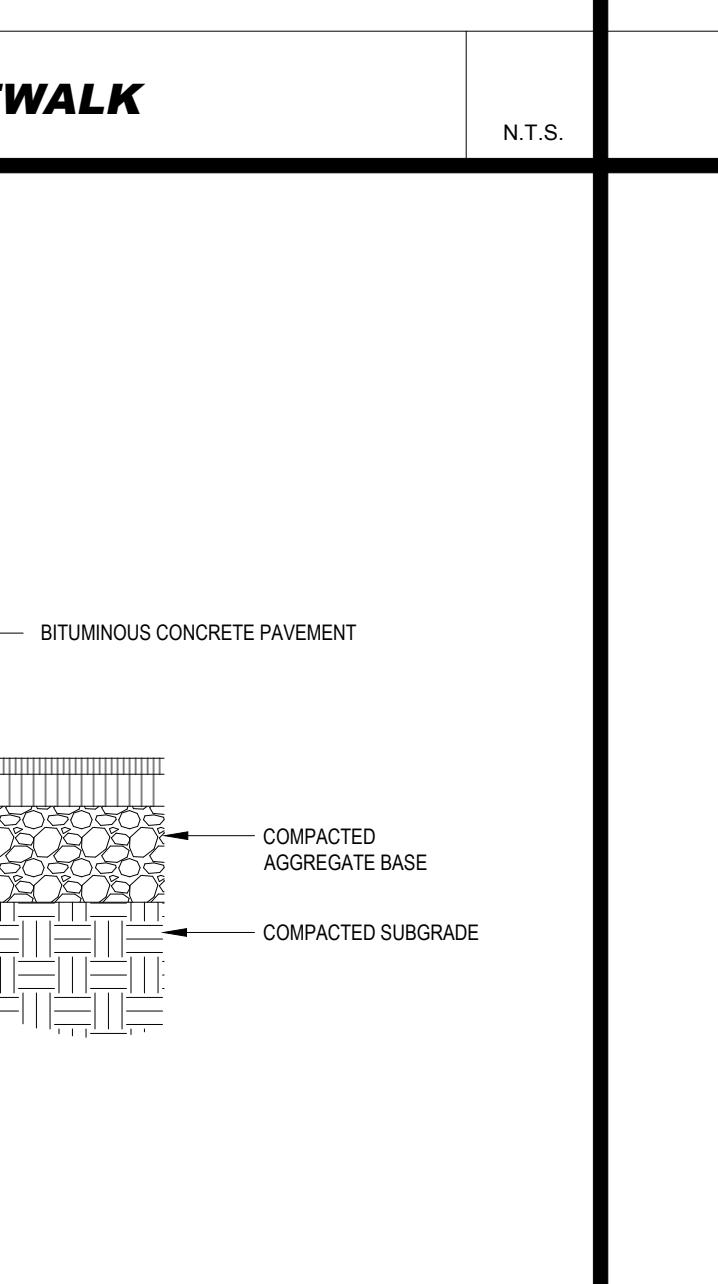
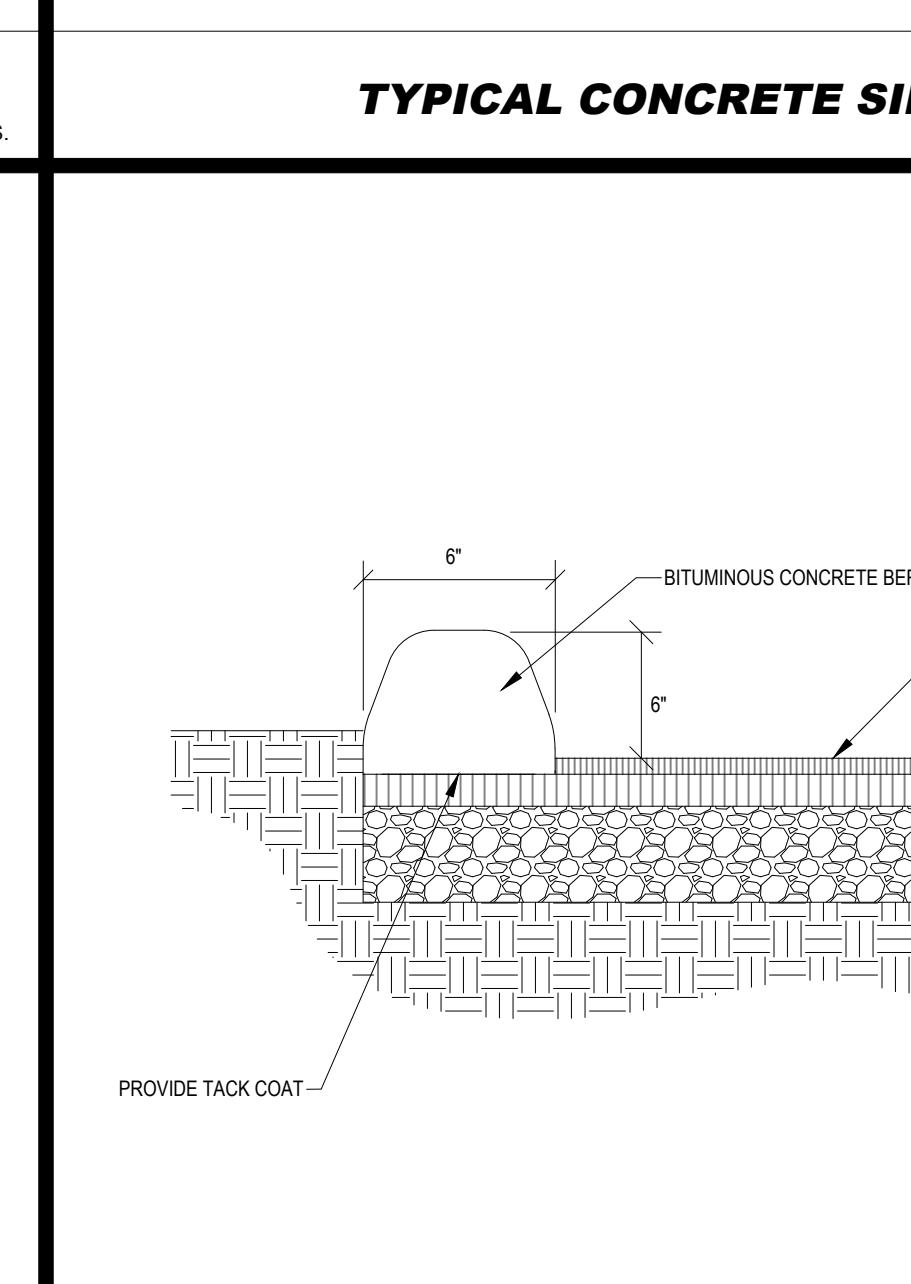
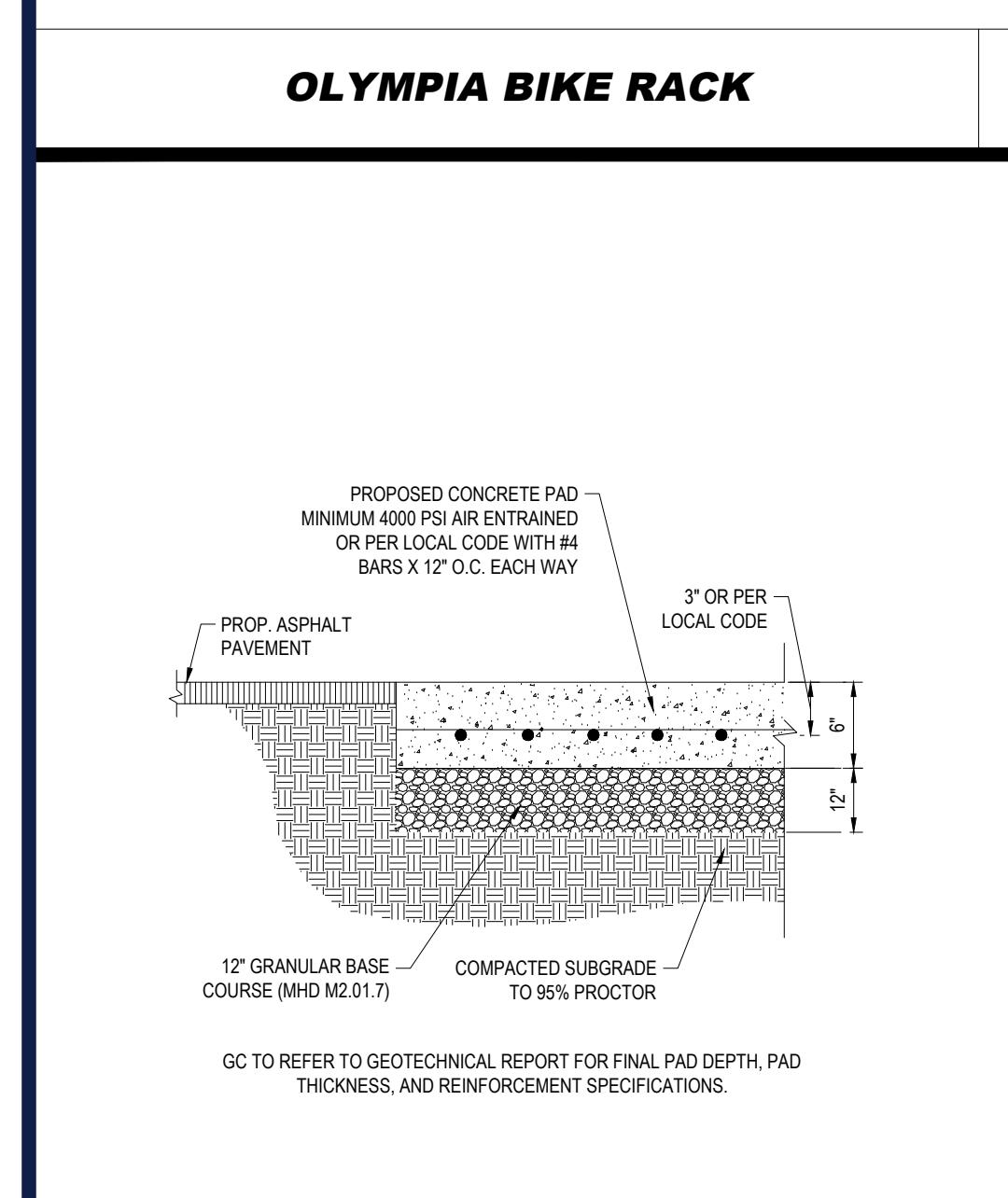
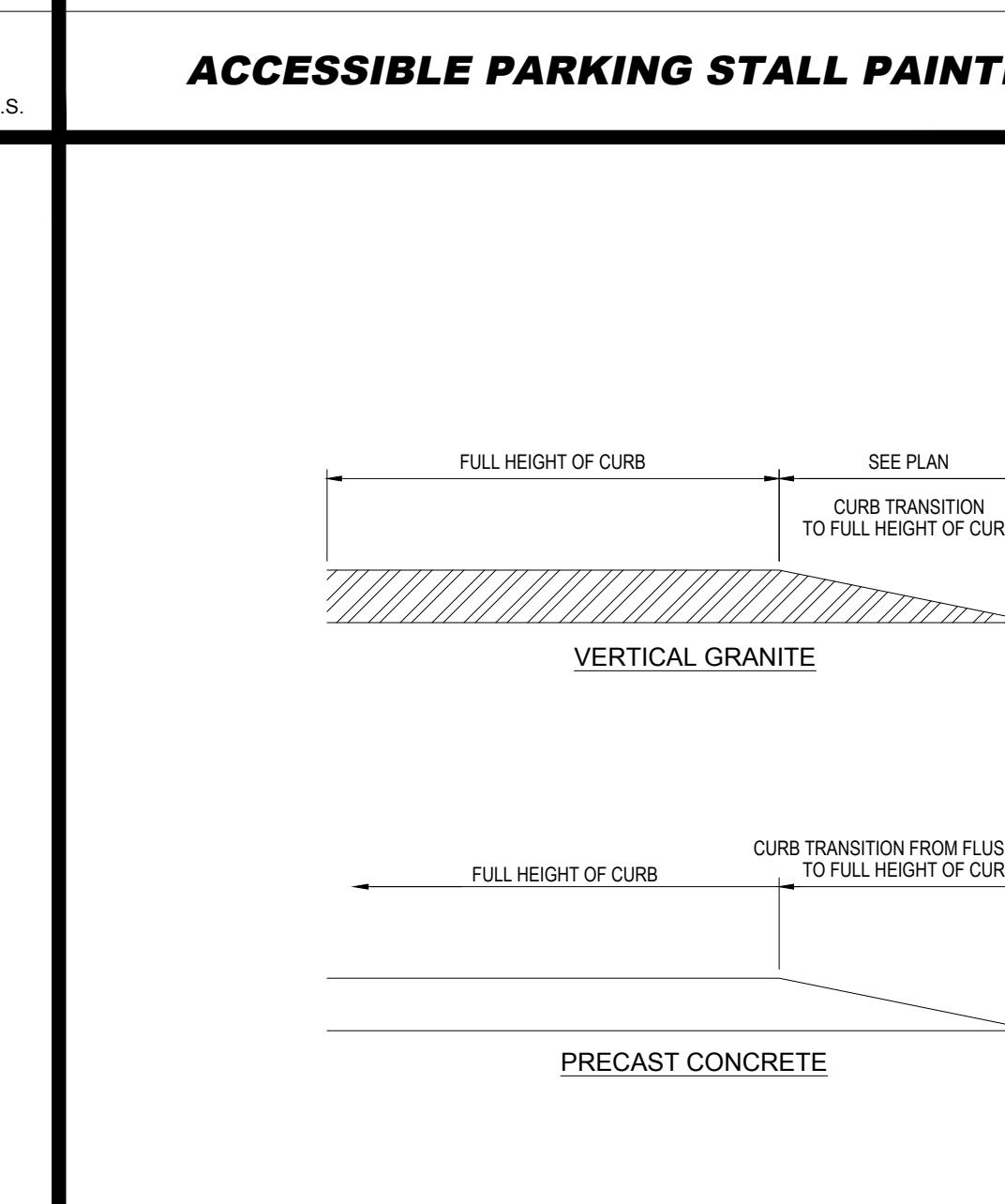
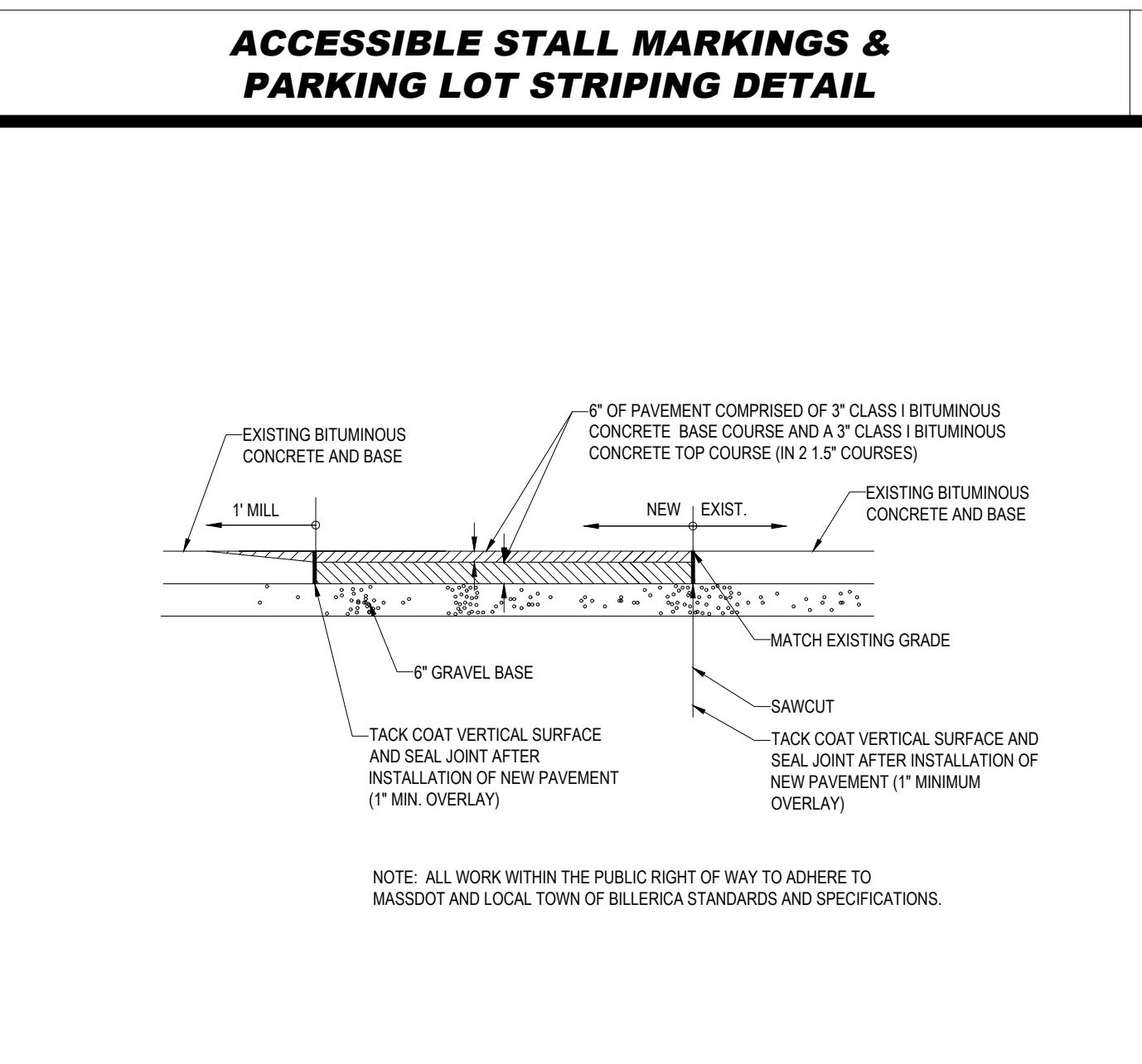
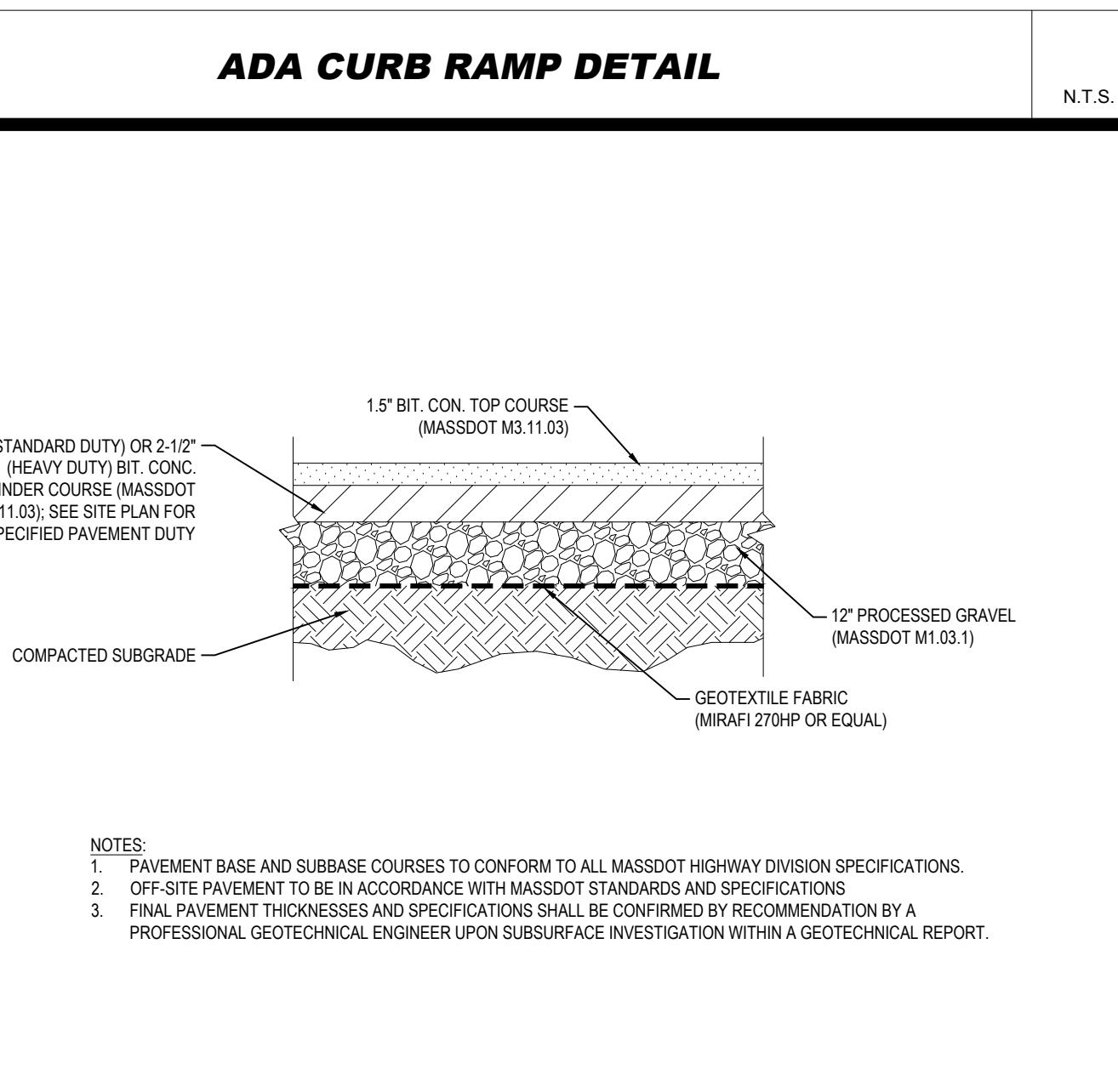
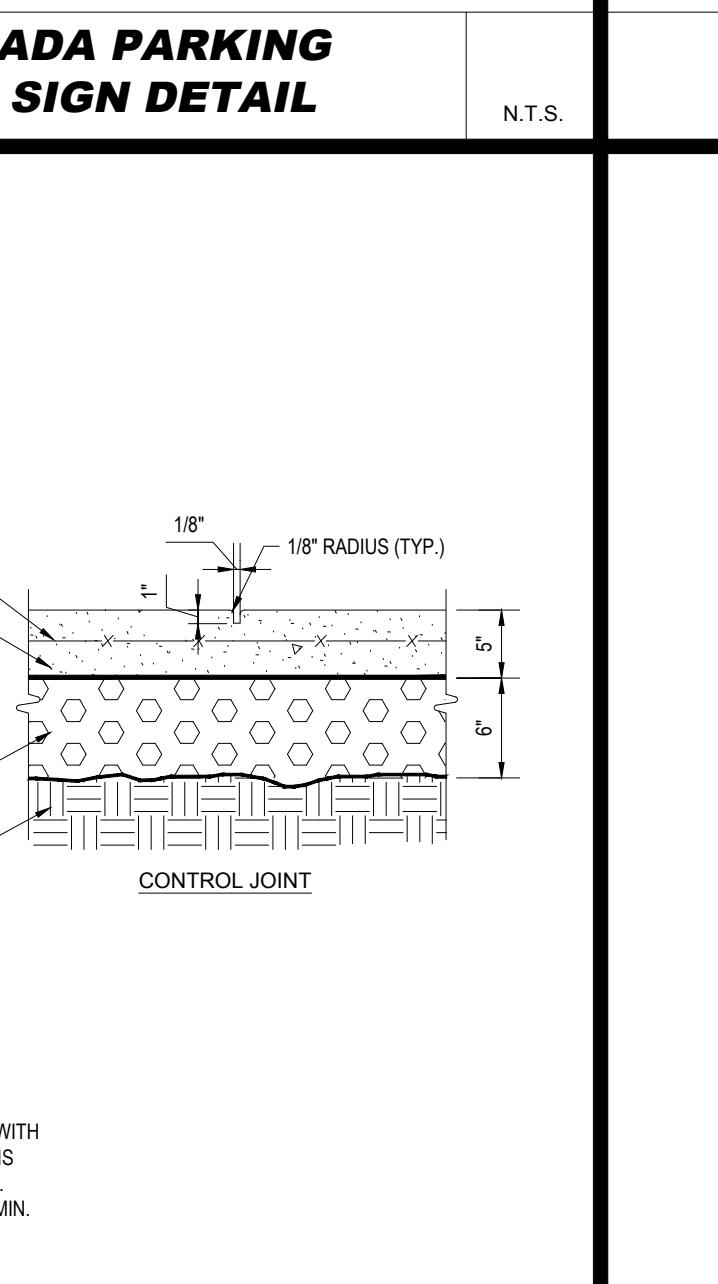
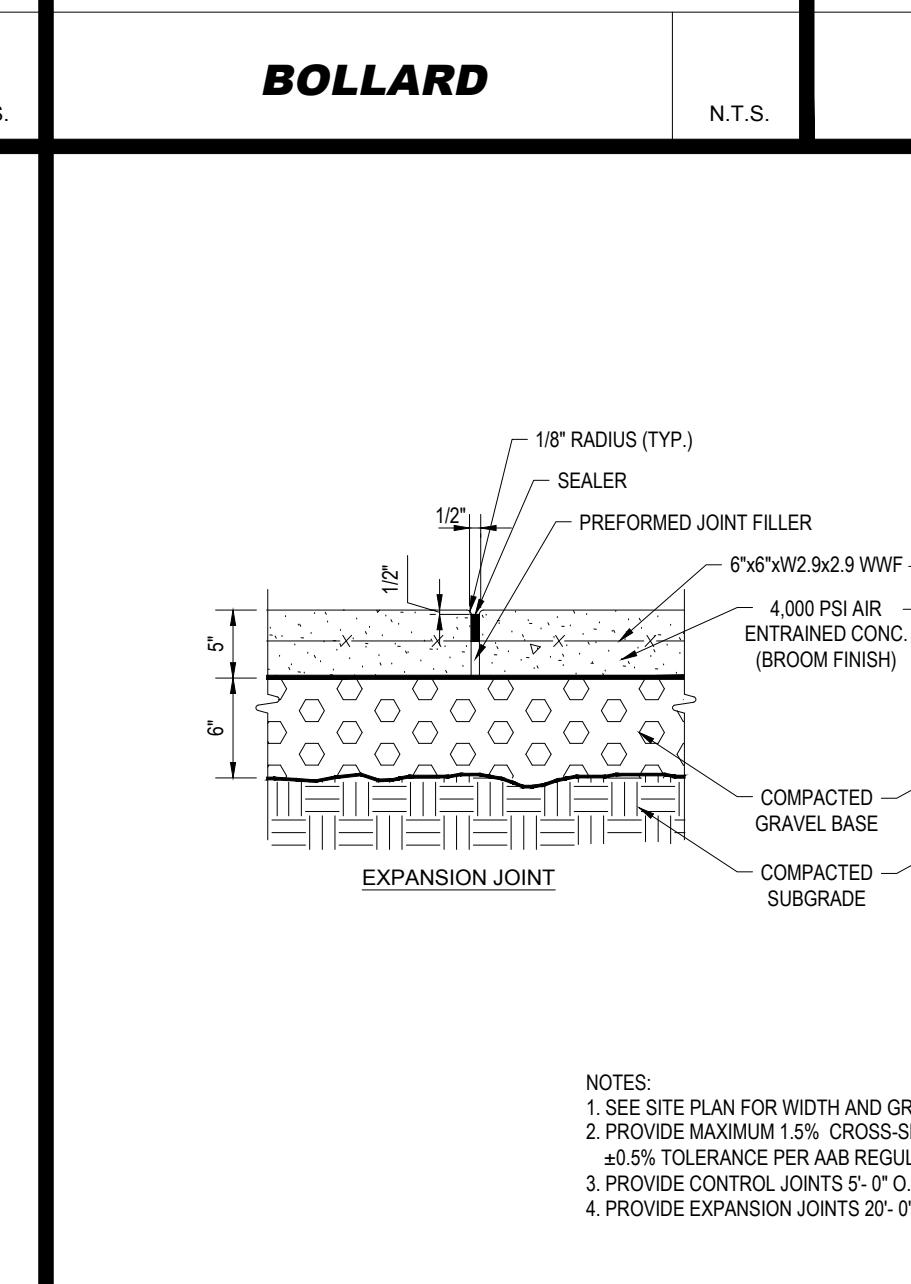
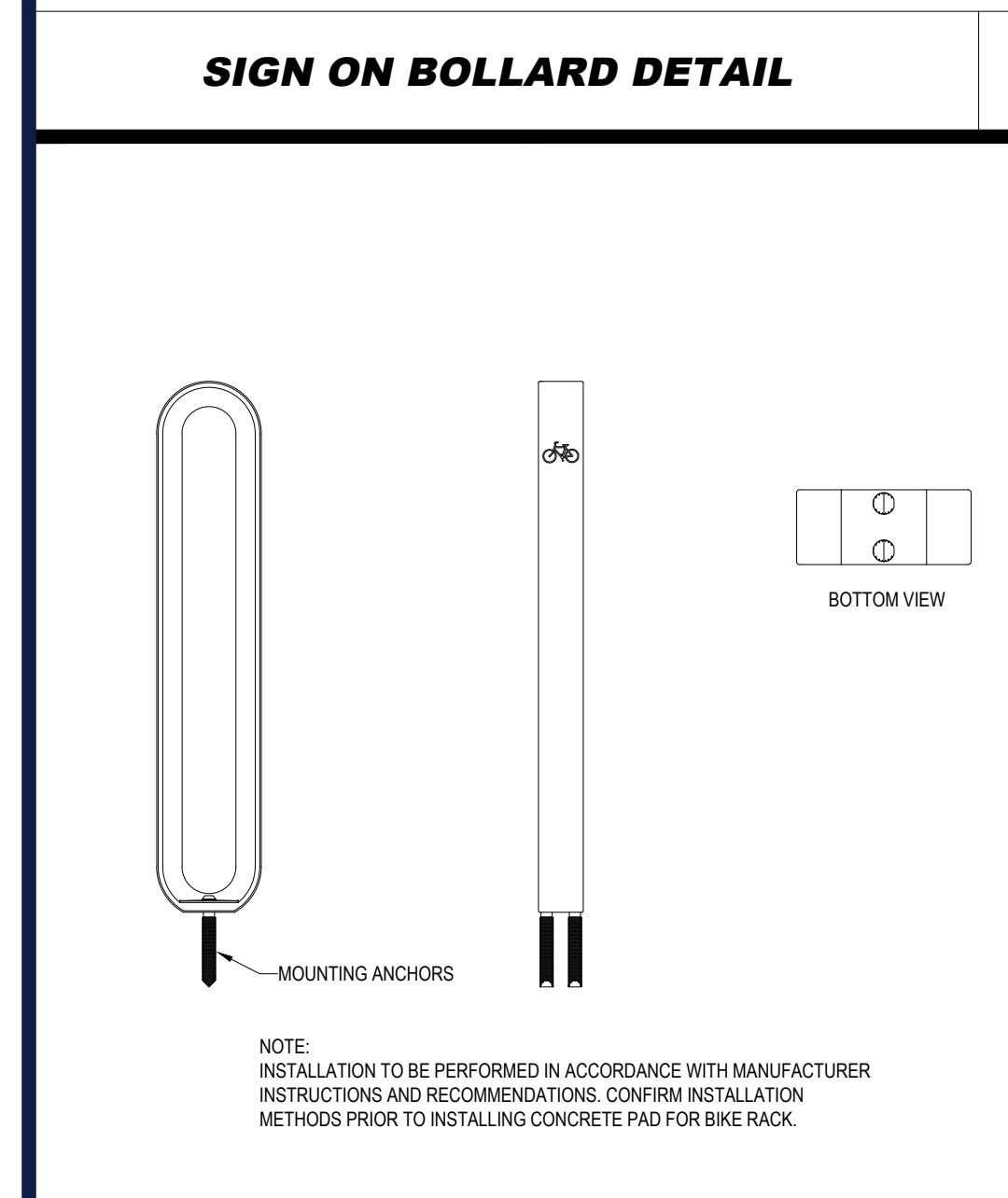
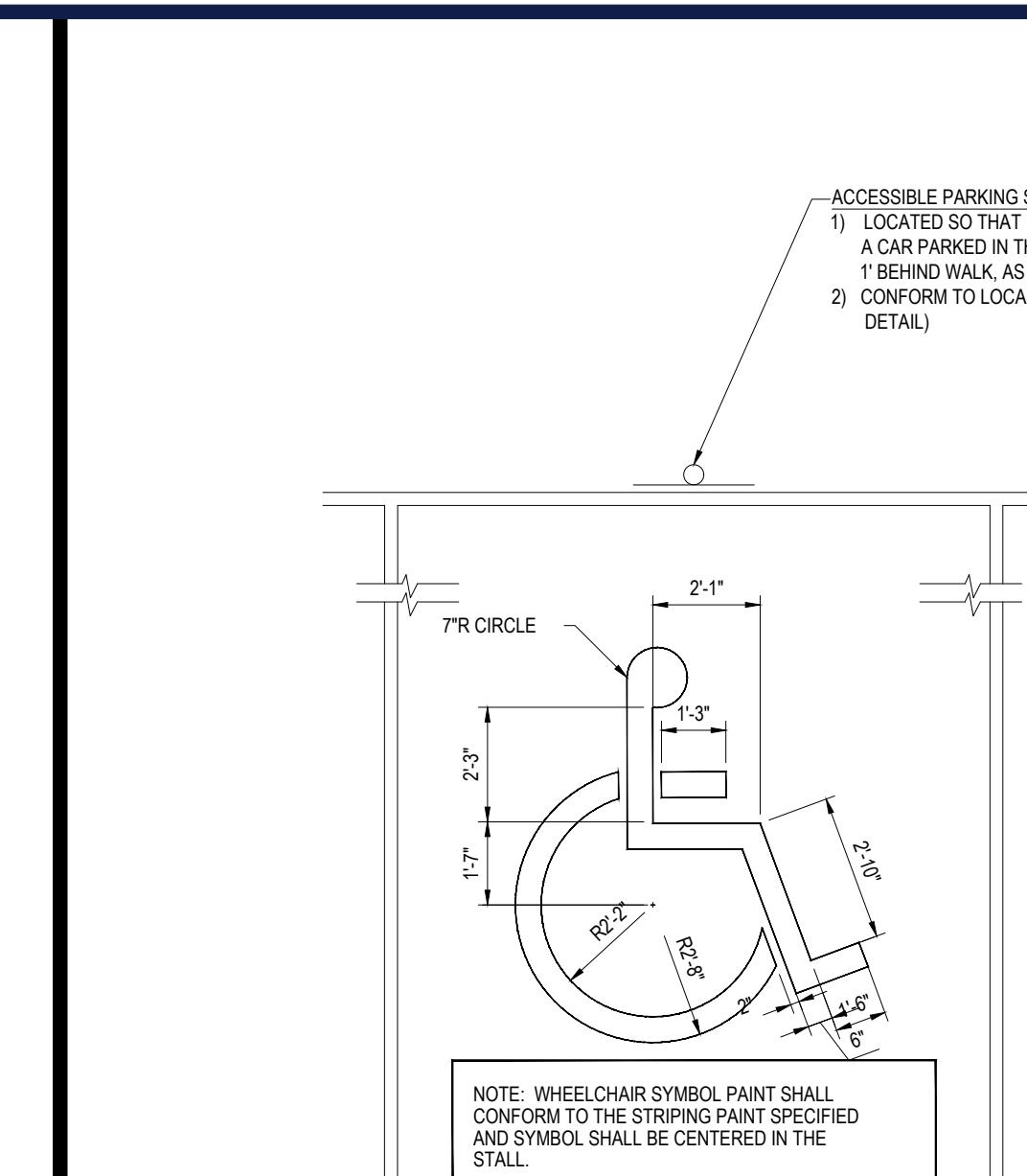
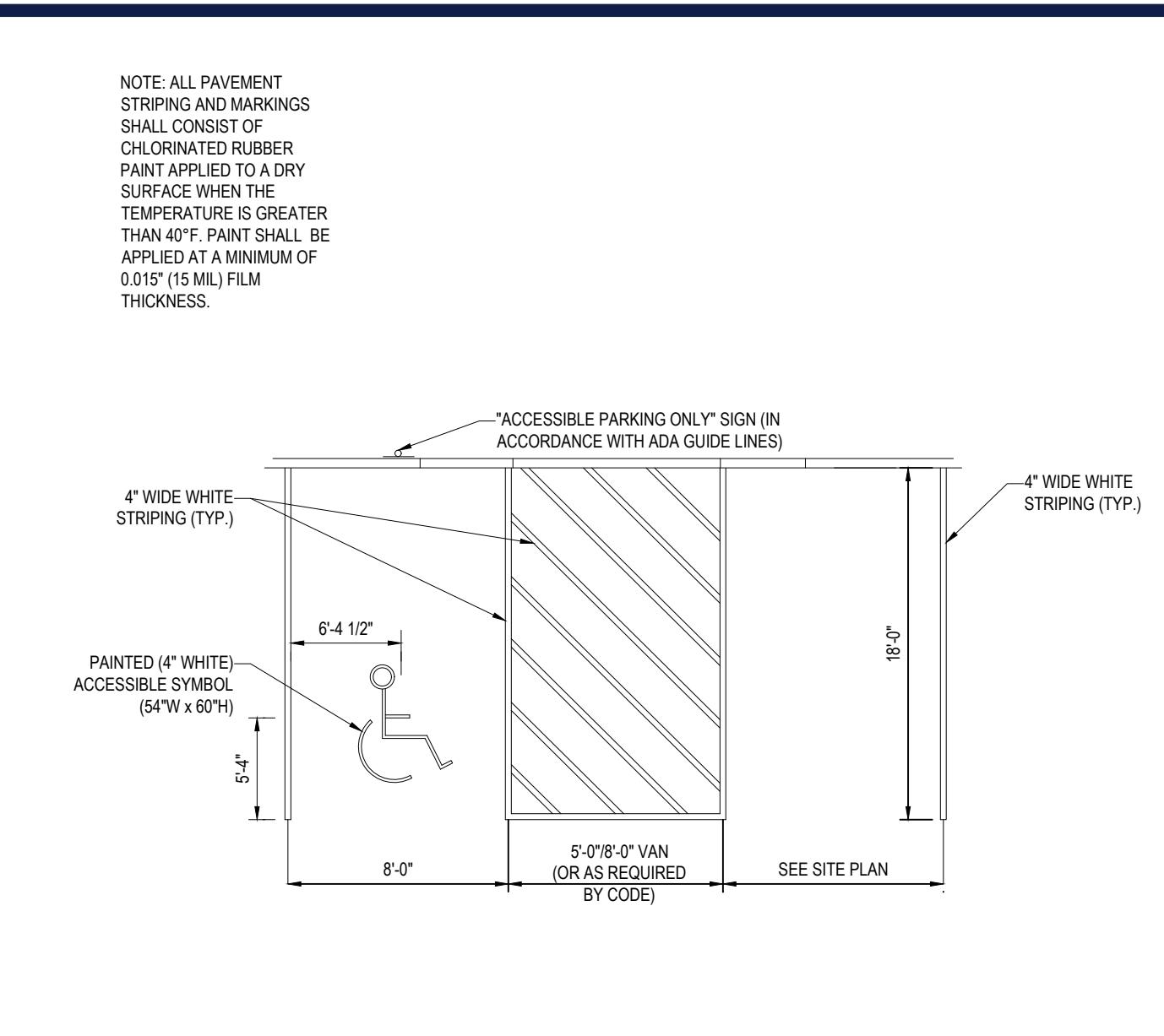
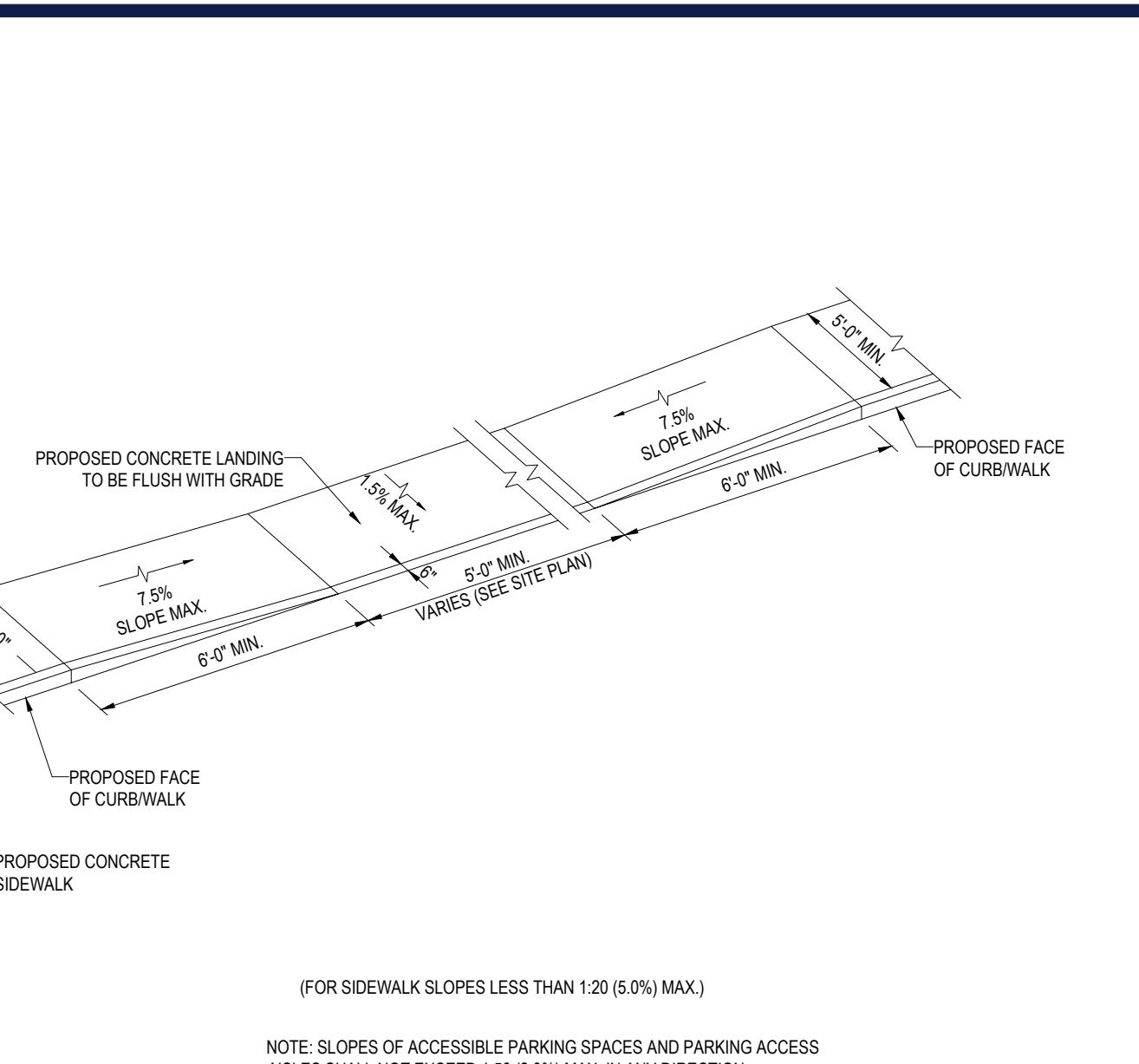
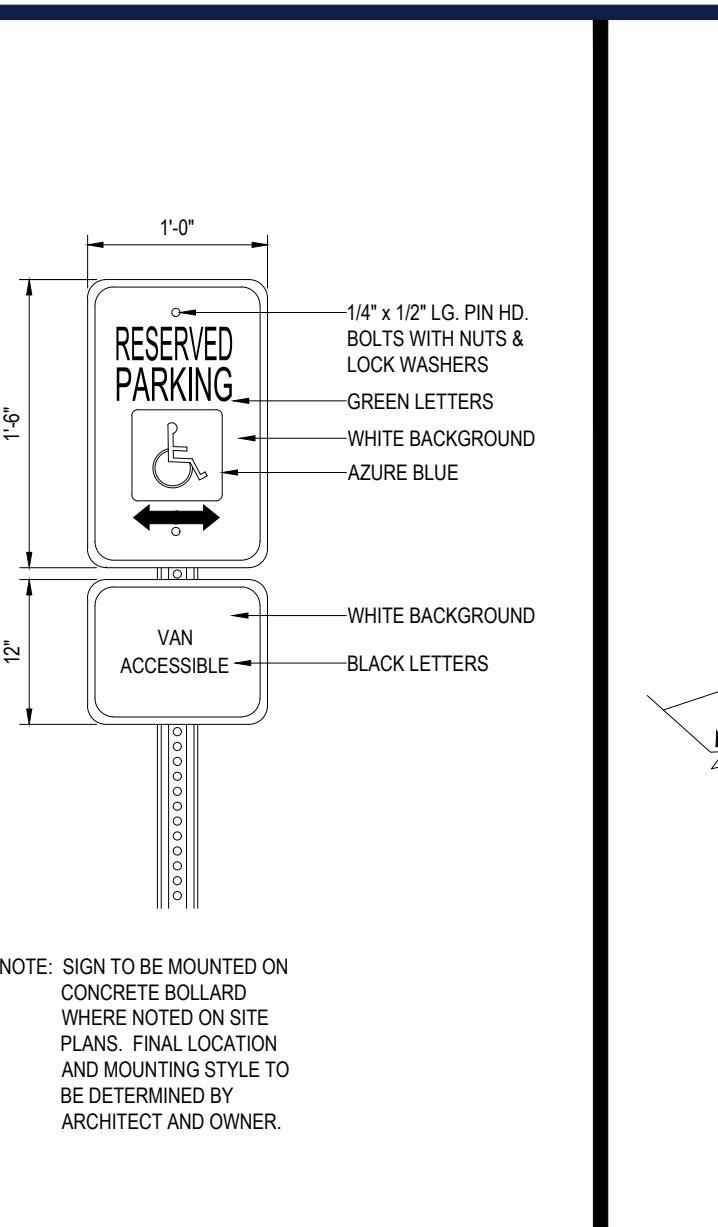
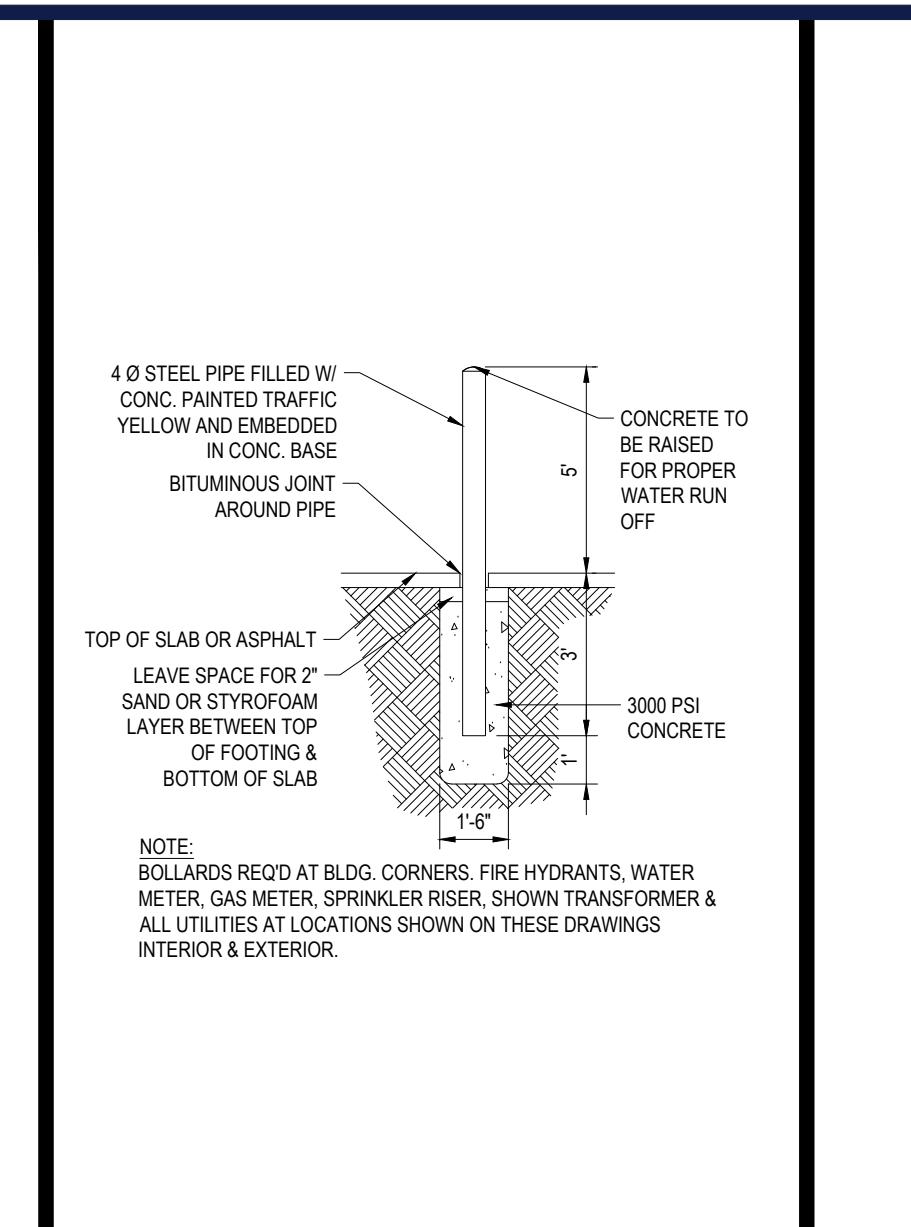
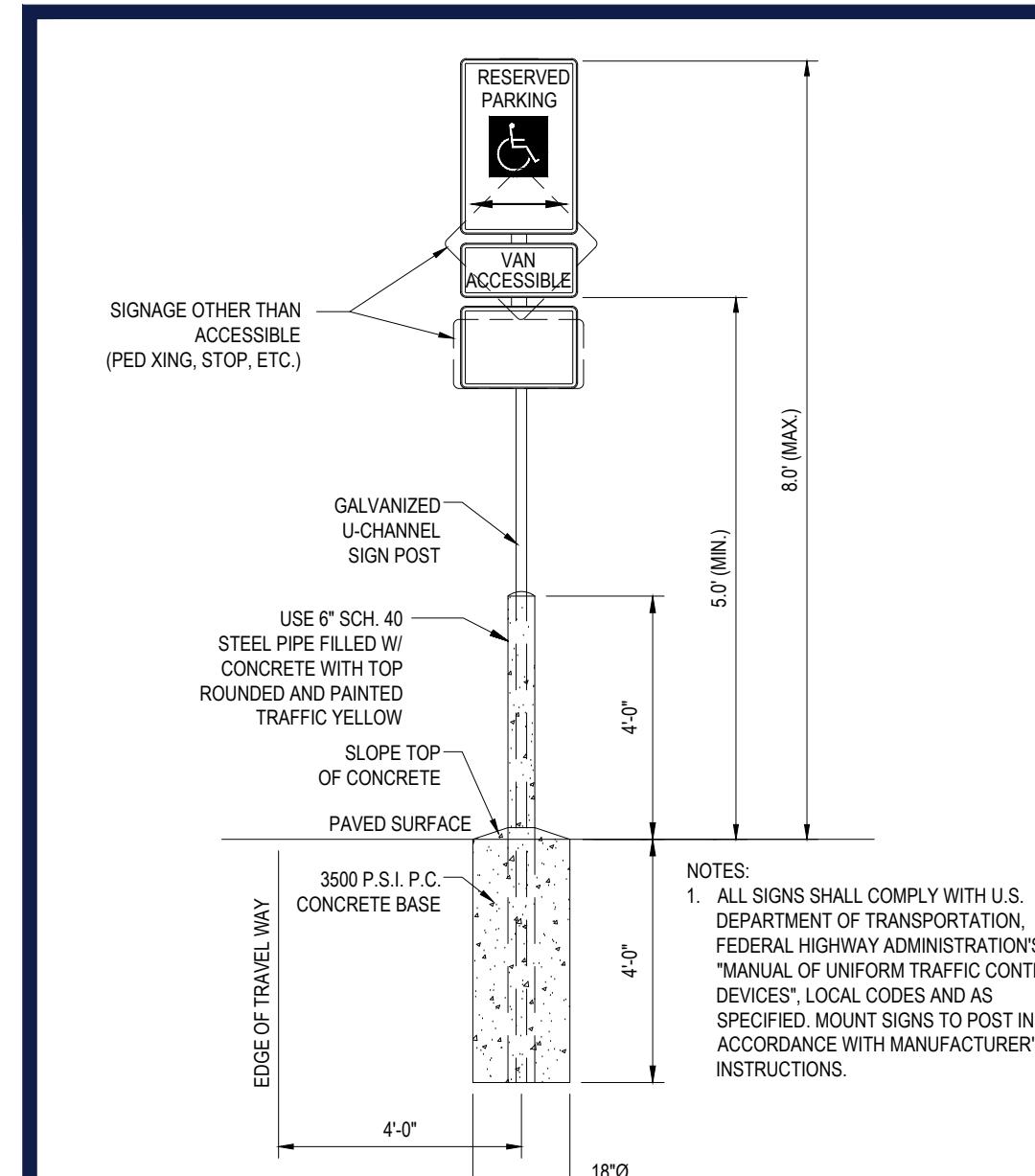
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DETAIL SHEET

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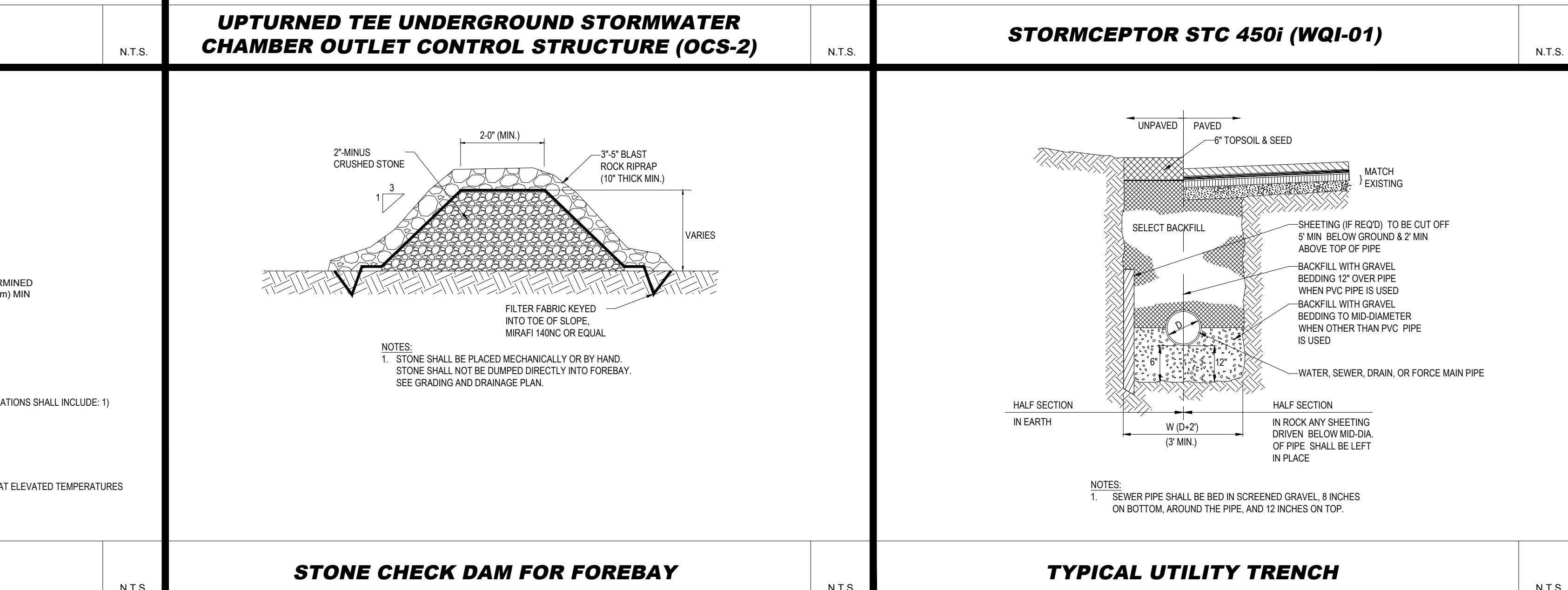
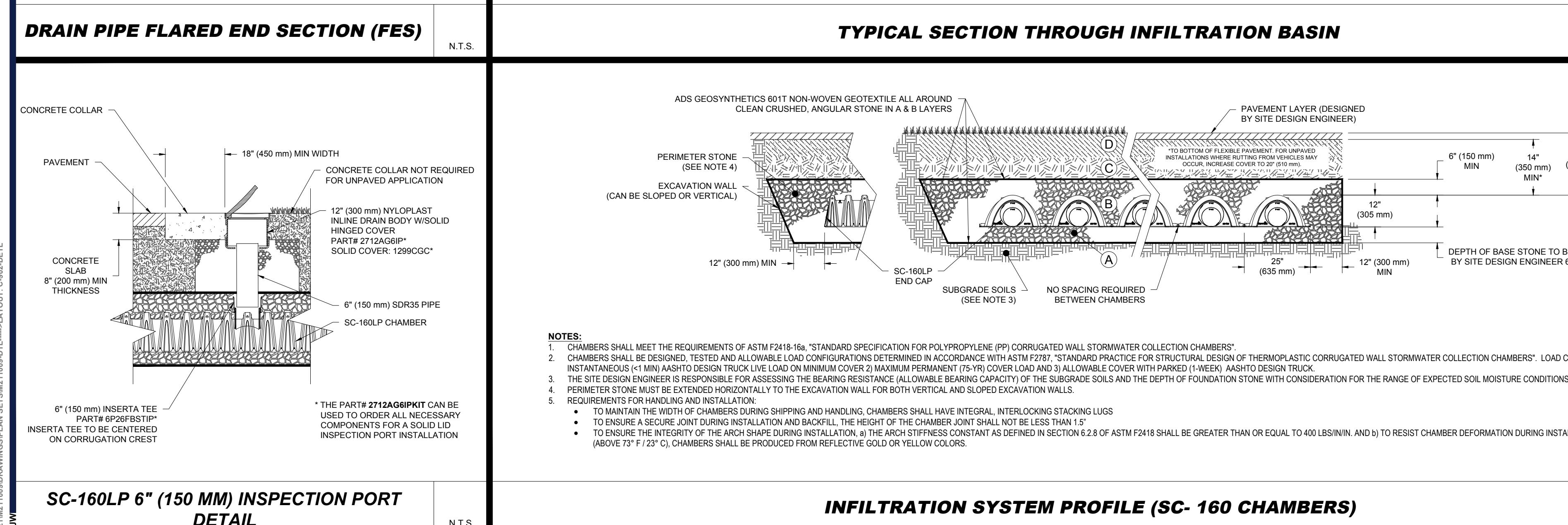
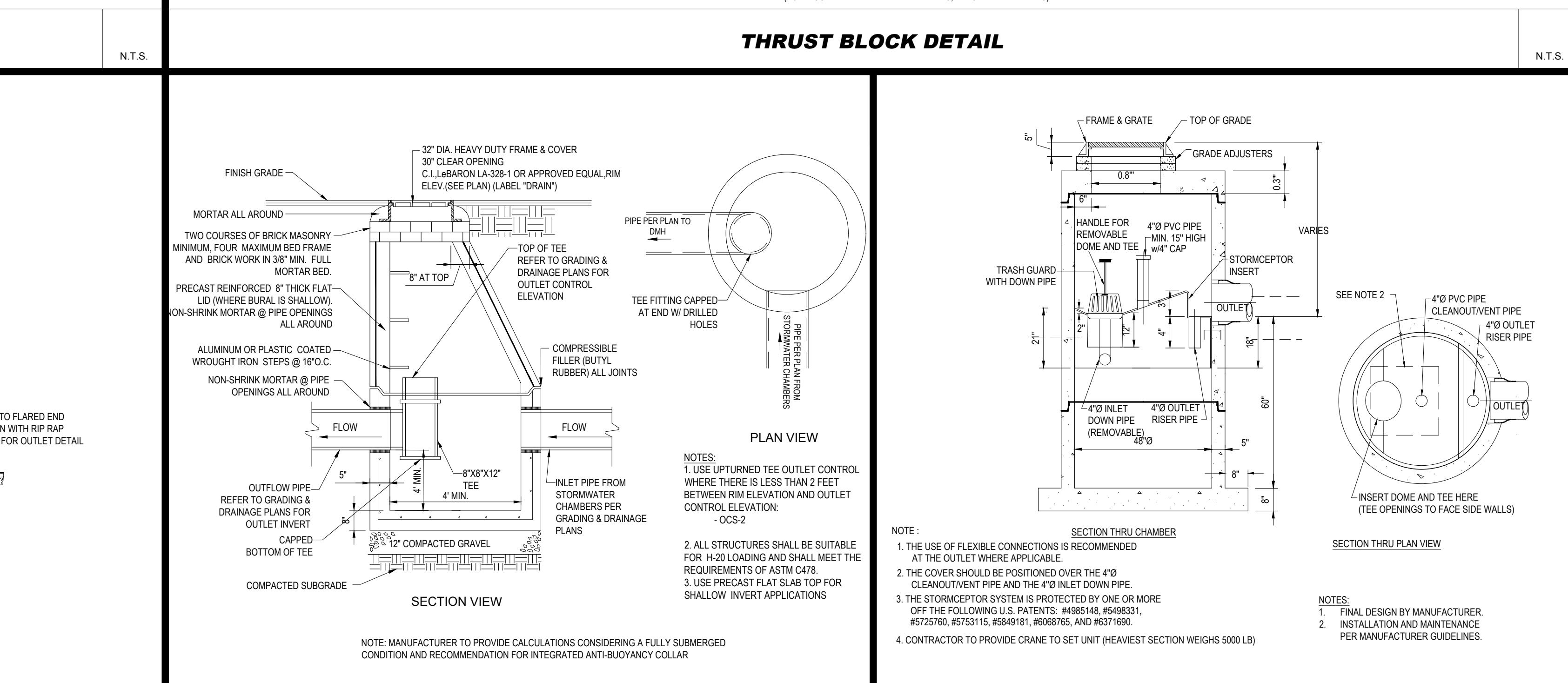
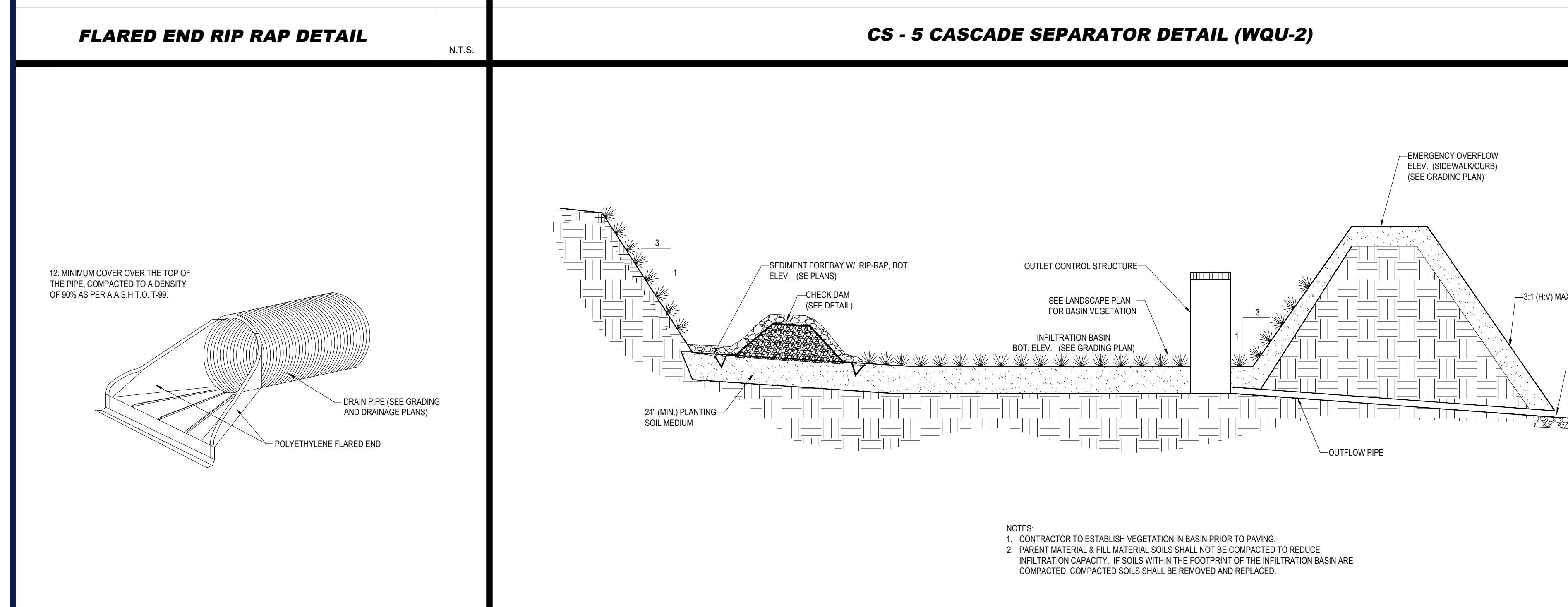
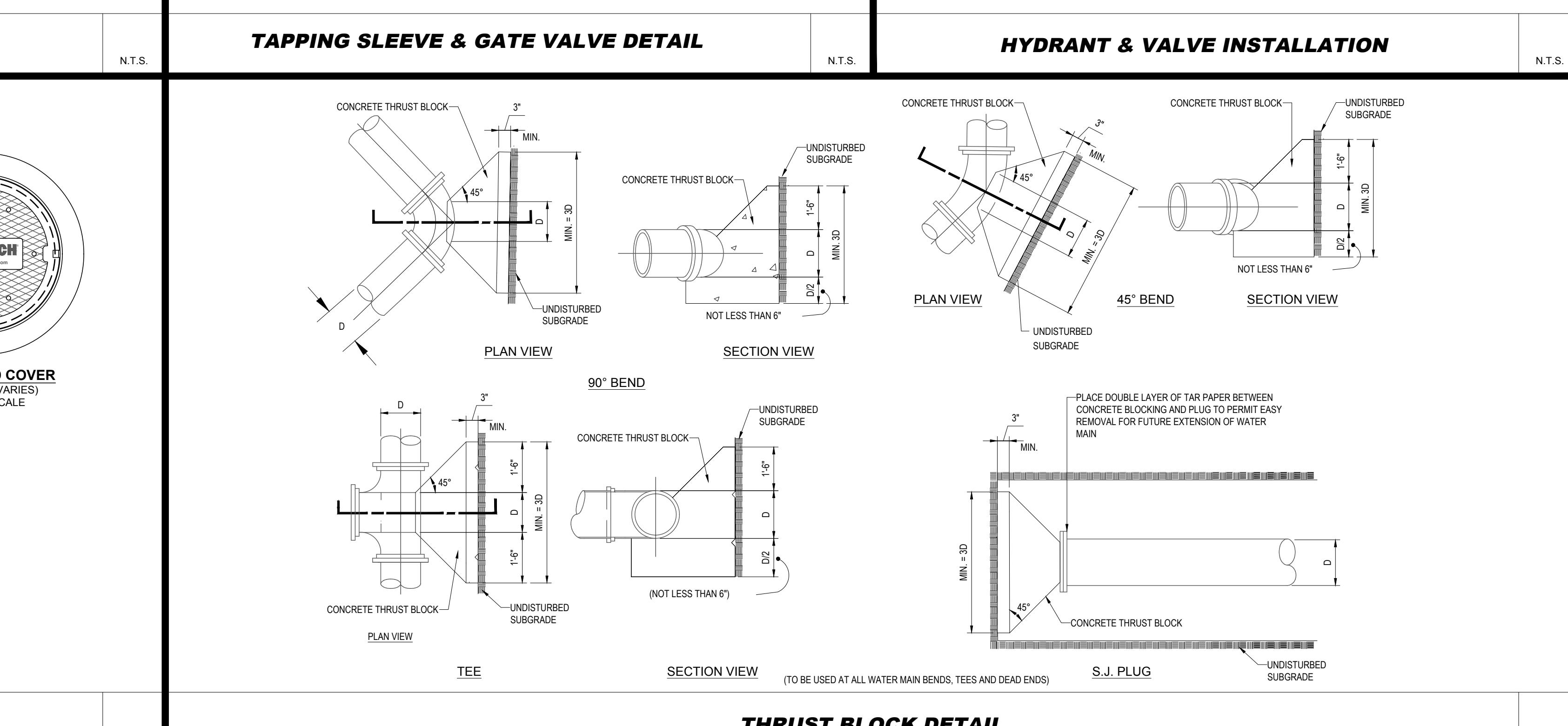
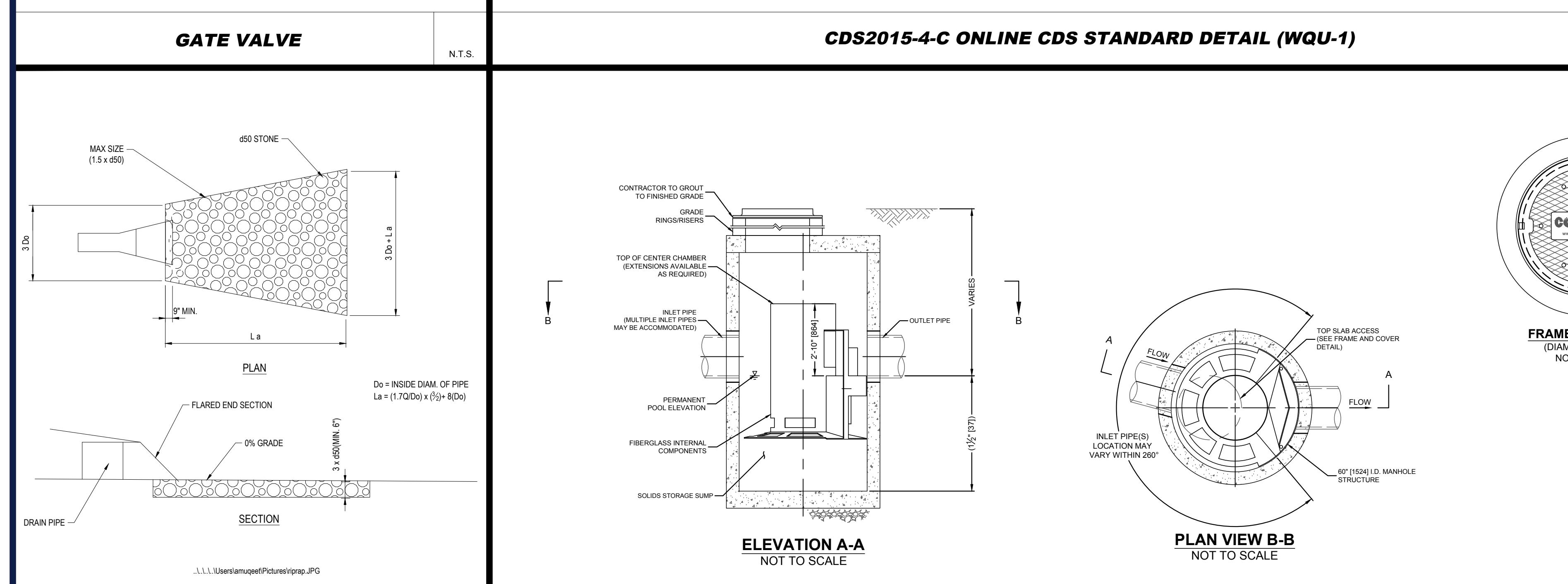
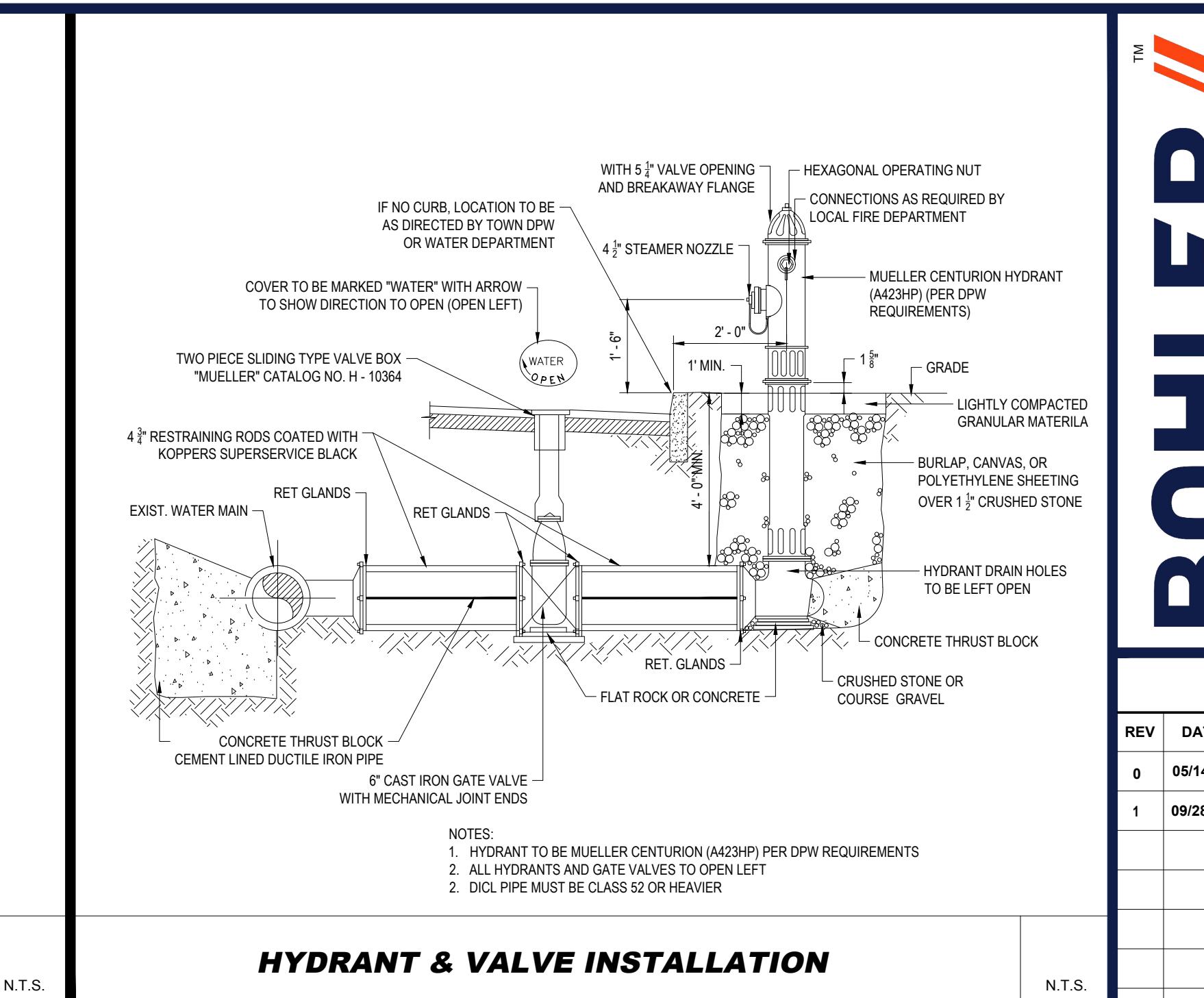
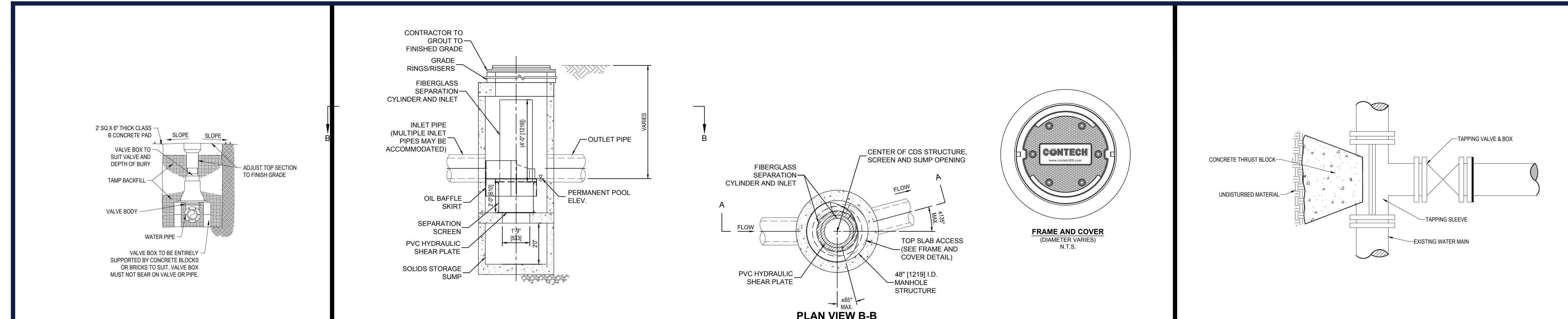




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SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS	
DATE	COMMENT
4/21	INITIAL SUBMISSION
3/21	PEER REVIEW RESPONSES



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SITE DEVELOPMENT PLANS

Partners

DOHLER



DETAIL SHEET

MBER:
C-902



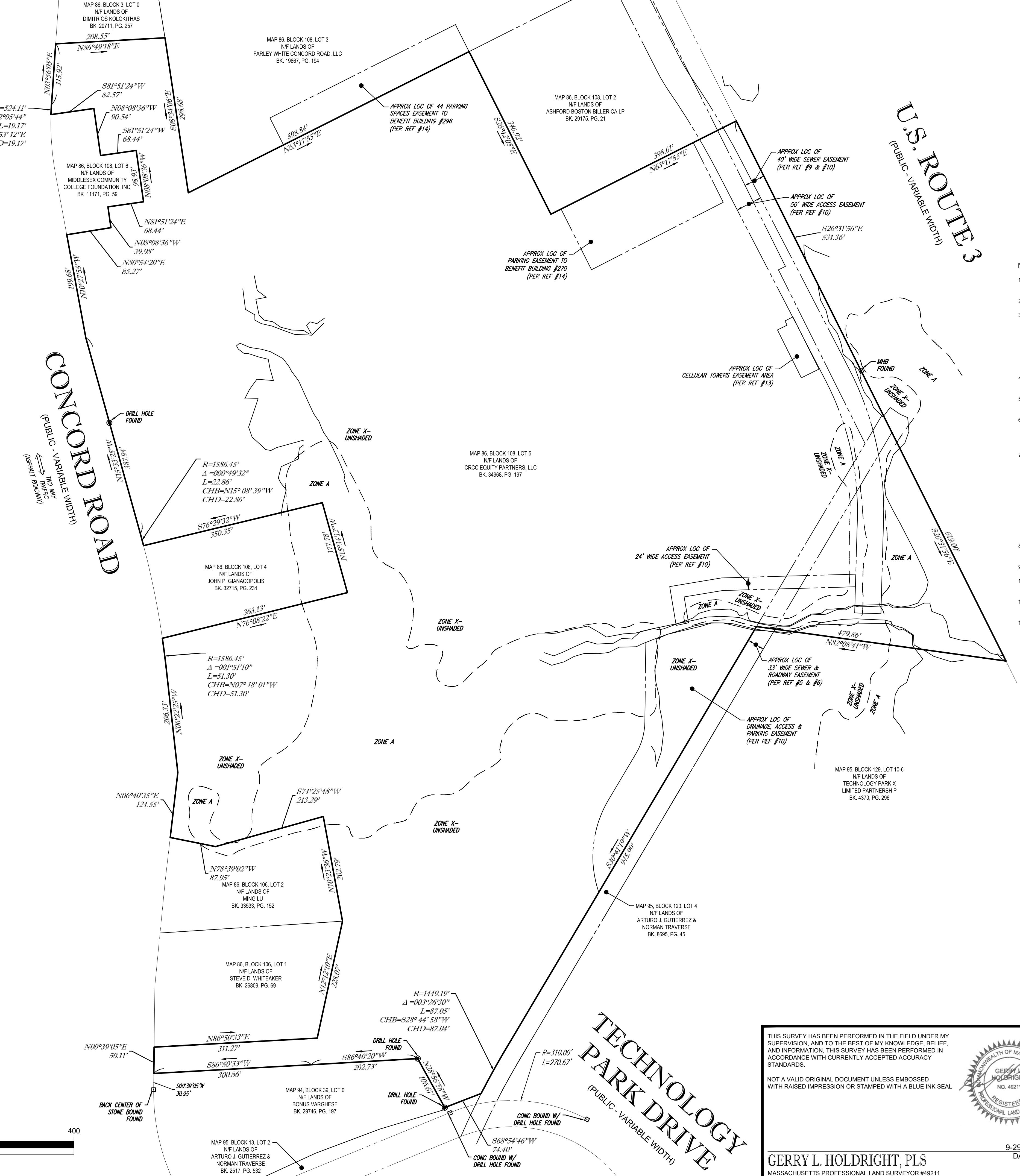
REFERENCES:

1. THE TAX ASSESSOR'S MAP OF BILLERICA, MIDDLESEX COUNTY, MAP #86.
2. MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FIRM, FLOOD INSURANCE RATE MAP, MIDDLESEX COUNTY, MASSACHUSETTS (ALL JURISDICTIONS) PANEL 266 OF 656," MAP NUMBER 25017C0266F, MAP REVISED: JULY 7, 2014.
3. MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FIRM, FLOOD INSURANCE RATE MAP, MIDDLESEX COUNTY, MASSACHUSETTS (ALL JURISDICTIONS) PANEL 267 OF 656," MAP NUMBER 25017C0267F, MAP REVISED: JULY 7, 2014
4. MAP ENTITLED "PLAN OF LAND IN BILLERICA, MASSACHUSETTS, MIDDLESEX COUNTY, PREPARED FOR LEGGAT MCCALL PROPERTIES, 300 CONCORD ROAD, BILLERICA, MASSACHUSETTS," PREPARED BY CONSULTING ENGINEERS & SCIENTISTS, LLC, DATED OCTOBER 20, 1998. RECORDED WITH THE MIDDLESEX COUNTY REGISTRY OF DEEDS AS PLAN BOOK 203, PLAN 76.
5. MAP ENTITLED "DEFINITIVE PLAN, TECHNOLOGY PARK IN BILLERICA, MASS., SUBMITTED BY TECHNOLOGY PARK REALTY TRUST I & II," PREPARED BY FLEMING, BIENVENU & ASSOCIATES, INC., DATED JUNE 4, 1982. TWO SHEETS. RECORDED WITH THE MIDDLESEX COUNTY REGISTRY OF DEEDS AS PLAN BOOK 139, PLAN 29.
6. MAP ENTITLED "PLAN OF LAND, CONCORD ROAD, BILLERICA, MA, PREPARED FOR BULL HN INFORMATION SYSTEMS, INC.," PREPARED BY HOWE SURVEYING ASSOCIATES, INC., DATED DECEMBER 12, 1994. RECORDED WITH THE MIDDLESEX COUNTY REGISTRY OF DEEDS AS PLAN BOOK 187, PLAN 94.
7. MAP ENTITLED "PLANS TO ACCOMPANY MODIFICATION TO SITE PLAN APPROVAL/NOTICE OF INTENT FOR 300 CONCORD ROAD, IN THE TOWN OF BILLERICA, MASSACHUSETTS, PROPOSED GRADING & DRAINAGE PLAN," PREPARED BY BEALS ASSOCIATES, INC., DATED MAY 22, 2007. SHEET 6 OF 7.
8. MAP ENTITLED "GRADING PLAN, 300 CONCORD ROAD, BILLERICA, MA 01821," PREPARED BY BEALS ASSOCIATES, INC., DATED JANUARY 20, 1998. SHEET 5 OF 11.
9. MAP ENTITLED "EASEMENT PLAN FOR HONEYWELL INFORMATION SYSTEMS INC.," PREPARED BY THE GUTIERREZ COMPANY, DATED FEBRUARY 4, 1982. RECORDED WITH THE MIDDLESEX COUNTY REGISTRY OF DEEDS AS PLAN BOOK 137, PLAN 65.
10. MAP ENTITLED "PARKING & ACCESS EASEMENT PLAN IN BILLERICA, MASS. FOR BULL HN INFORMATION SYSTEMS, INC.," PREPARED BY THE GUTIERREZ COMPANY, DATED DECEMBER 11, 1989. RECORDED WITH THE MIDDLESEX COUNTY REGISTRY OF DEEDS AS PLAN BOOK 176, PLAN 12.
11. MAP ENTITLED "PLAN OF LAND, WANG LABORATORIES, 600 TECHNOLOGY PARK DRIVE, BILLERICA, MA 01821," PREPARED BY HOWE SURVEYING ASSOCIATES, INC., DATED APRIL 8, 1987. LAST REVISED JUNE 5, 1997. RECORDED WITH THE MIDDLESEX COUNTY REGISTRY OF DEEDS AS PLAN BOOK 194, PLAN 59.
12. UNDERGROUND TELECOMMUNICATIONS MAPPING PROVIDED BY AT&T.
13. MAP ENTITLED "EASEMENT PLAN CELLULAR TOWERS AREA, 296, 298 & 300 CONCORD RD, BILLERICA, MA, PREPARED FOR: KS PARTNERS, LLC," PREPARED BY TAJ ENGINEERING, LLC, DATED MARCH 17, 2021. LAST REVISED MARCH 30, 2021.
14. MAP ENTITLED "ALTA/NSPS LAND TITLE SURVEY PLAN, 296, 298 & 300 CONCORD RD, BILLERICA, MA, PREPARED FOR: KS PARTNERS, LLC," PREPARED BY TAJ ENGINEERING, LLC, DATED OCTOBER 6, 2020. LAST REVISED NOVEMBER 18, 2020. TWO SHEETS.
15. UNDERGROUND ELECTRIC FACILITY MAPPING PROVIDED BY NATIONAL GRID.

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GERRY L. HOLDRIGHT, PLS

MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #49211

3	UPDATED PER ADDITIONAL TOPOGRAPHY	B.S.B.	R.J.K.	G.L.H.	9-29-2021
2	REVISED WETLAND FLAGGING DESIGNATION	-	R.J.K.	G.L.H.	5-19-2021
1	REVISED PER ADDITIONAL UTILITY MAPPING	-	R.J.K.	G.L.H.	5-10-2021
No.	DESCRIPTION OF REVISION	FIELD CREW	DRAWN:	APPROVED:	DATE

BOUNDARY, PARTIAL TOPOGRAPHIC & UTILITY SURVEY
00 CONCORD ROAD
AP 86, BLOCK 108, LOT 5
TOWN OF BILLERICA
MIDDLESEX COUNTY

COMMONWEALTH OF MASSACHUSETTS

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